3GPP TSG-T (Terminals) Meeting #18 New Orleans, USA, 4-6 December 2002

Tdoc TP-020285

Source: TSG-T3

Title: Change Requests to TS 11.13 "Testspecification for Java Card™ API"

Document for: Approval

This document contains the following change request:

Doc-1st-	Spec	CR	Phas	Subject	Cat	Vers.	Vers.	Doc-2nd-
Level			е			old	new	Level
TP-020285	11.13	A005	R99	R99 updates to TS 11.13 that has been upgraded to R99 at T#17	F	8.0.0	8.1.0	T3-020873

3GPP TSG-T3 Meeting #25
Maastricht, The Netherlands, 5 – 8 November 2002
3GPP-T3 AH#83 API TESTING
La Ciotat, France, 9 - 11 October, 2002

T3-020873

Tdoc T3z022225

	CHANGE REQUEST	Form-v3
*	11.13 CR A005	
For <u>HELP</u>	on using this form, see bottom of this page or look at the pop-up text over the # symbo	ls.
Proposed cha	ge affects: # (U)SIM X	ork
Title:	₩ Update of 11.13 Specification for Release 99	
Source:	₩ TSG T3	
Work item cod	e: ■ TEI Date: 11/10/02	
Category:	# F Release: ₩ R99	
	Use one of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. Use one of the following release 2 R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)	es:

Reason for change: # Changes on 3GPP TS 03.19 Specification.

Summary of change: # •

- Addition of the parameter files in the API part
- Three new events are added in the 3GPP TS 03.19, specification, EVENT_FORMATTED_SMS_CB, EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION, EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION, this implies the following changes:
 - o setEvent, setEventList methods in Toolkin Registry Class
 - o Addition of new conformance requirements in getSecuredDataLength and getSecuredDataOffset method in EnvelopeHandler Class
 - o It is included the new three events in the processToolkit method in the ToolkitInterface
 - o In the Minimum Handler Availability part,
 ProactiveHandler, ProactiveResponseHandler,
 EnvelopeHandler and EnvelopeResponseHandler test
 are added the three new events within the CRRN1 of
 each test and it implies changes within the test
 area cases and test coverage
 - o For the Handler Integrity part only is update the EnvelopeHandler test with the inclusion of the new three Events
 - o In the Applet triggering part are added three new tests for the new three events, this also implies the addition of the new three acronyms in the Annex

	 o In the Input Data Test for the Framework Security Management is added a new Conformance requirement because the new event EVENT_FORMATTED_SMS_CB Addition of the following methods and its tests in the MEProfile Class: check, getvalue and copy. This also implies the addition of the new three acronymous in the Annex A Editorial Changes
Consequences if not approved:	

Clauses affected:	# 6, Annex A, Annex B, Annex C, Annex D, Annex E, Annex F			
Other specs	★ Other core specifications			
Affected:	Test specifications			
7117001041	O&M Specifications			
	Odivi Specifications			
Other comments:	光			

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6 API Test Plan

6.1 Package sim.access:

6.1.1 Interface SIMView

Note: The Test applet shall be run on a class that implements this interface.

- 6.1.1.1 Constants

Test Area Reference: API_1_SVW_CONST

6.1.1.1.1 Conformance Requirements

This section does not describe the conformance requirements for a method, but rather for the constants of the interface.

Normal execution

CRRN1: The constants shall have the same name and value that is defined in GSM 03.19 [7].

6.1.1.1.2 Test Suite Files

None.

6.1.1.1.3 Test Procedure

The constants in Java are resolved at compilation time, therefore a runtime test is not useful. No test of constants will be performed.

6.1.1.2 Method select(short fid, byte[] fci, short fciOffset, short fciLength)

Test Area Reference: API 1 SVW -SLCTS BSS

6.1.1.2.1 Conformance Requirements

The method with the following header shall be compliant to its definition in the API.

Normal execution

CRRN1: If the desired file is selected, the length of the FCI (File Control Information) which has been written to the array fci is returned.

CRRN2: If the length fciLength is greater than or equal to the length of the FCI structure, the whole FCI structure is copied into the array fci and the length of the FCI which has been written to the array fci is returned.

CRRN3: If the length fciLength is less than the length of the FCI structure, the first part of the FCI structure is copied into the array fci and the length of the FCI which has been written to the array fci is returned.

CRRN4: After selecting a DF/MF no EF is selected.

CRRN5: After selecting a linear fixed EF no record is selected.

CRRN6: After selecting a cyclic EF the first record which is the last updated record is selected.

CRRN7: The current files (file context) of any other applets shall not be changed. See GSM 03.19 [7] - §5.2. This will be tested during the testing of the framework.

CRRN8: The information returned by fci shall be formatted as described in GSM 11.11 [3], §9.2.1.

CRRN9: The file with a File-ID that matches fid shall be found according to the following selection rules:

- 1) An immediate child EF or DF of the current MF/DF can be selected,
- 2) A sibling DF of the current DF can be selected,
- 3) The current MF/DF it self can be selected,
- 4) The parent MF/DF of the current DF can be selected,
- 5) The MF can always be selected.

Parameter errors

CRRP1: If the array fci is null, an instance of NullPointerException shall be thrown.

- CRRP2: If fciOffset is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP3: If fciLength is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP4: If fciOffset plus fciLength is greater than the length of the array fci.length, or fciOffset equals fci.length, an instance of ArrayIndexOutOfBoundsException shall be thrown.

Context errors

- CRRC1: If the file with a File-ID which matches fid could not be found according to the selection rules listed in CRRN9, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.FILE_NOT_FOUND.
- CRRC2: If the method call causes a memory problem (e.g. memory access error), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.MEMORY_PROBLEM.
- CRRC3: If the method call causes an error to occur that is not expected and thus not handled, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INTERNAL_ERROR.

6.1.1.2.2 Test Suite Files

Additional requirements for the GSM personalisation: None

Test Script: API_1_SVW_SLCTS_BSS_1.scr

Test Applet: API_1_SVW_SLCTS_BSS_1.java

Load Script: API_1_SVW_SLCTS_BSS_1.ldr

Cleanup Script: API_1_SVW_SLCTS_BSS_1.clr

Parameter File: API_1_SVW_SLCTS_BSS_1.par

6.1.1.2.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
0	SIM Initialisation	Responses ignored.	•
1	Select EFICCID in MF (Transparent EF)	No exception shall be thrown.	
	<pre>fid = SIMView.FID_EF_ICCID byte[] fci = new byte[34]</pre>	Shall return a value not greater	
	fciOffset = 0	than 20.	
	fciLength = 20	<description fci:<="" of="" th=""><th></th></description>	
	select()	XX XX	
		XX XX	
		2F E2	
		04	
		>	
2	Select EF _{ICCID} in MF (Transparent EF)	No exception shall be thrown.	
	fid = SIMView.FID_EF_ICCID	Shall return 13.	
	<pre>fciOffset = 0 fciLength = 13</pre>	fci shall contain the first 13 bytes of	
	select()	the FCI structure.	
3	Select DF _{GSM} in MF	No exception shall be thrown.	
	fid = SIMView.FID_DF_GSM	Shall return 7.	
	fciOffset = 0	fci shall contain the first 7 bytes	
	<pre>fciLength = 7 select()</pre>	of the FCI.	
	,	<description fci:<="" of="" th=""><th></th></description>	
		XX XX	
		XX XX	
		7F 20	
		02	
3	Select DF _{GSM} in MF	No exception shall be thrown.	
	fid = SIMView.FID_DF_GSM	Shall return 7.	
	fciOffset = 0	fci shall contain the entire FCI	
	fciLength = 7	structure.	
	select()	<description fci:<="" of="" th=""><th></th></description>	
		XX XX	
		XX XX	
		7F 20	
		02	
4	Select EF _{ACM} in DF _{GSM} (CyclicEF)	No exception shall be thrown.	
	fid = SIMView.FID_EF_ACM	Shall return a value between 15	
	fciOffset = 0	and 20. (Cyclic EF)	
	fciLength = 20	fci shall contain the first 15 or more	
	select()	bytes of the FCI structure.	
		fci[14] shall have the value 3	
		(length of record).	
5	Select MF	No exception shall be thrown.	
	<pre>fid = SIMView.FID_MF fciOffset = 0</pre>	Shall return a value between 22	
	fciLength = 34	and 34. fci shall contain the entire FCI	
	select()	structure.	
6	Select DF _{TELECOM} in MF	No exception shall be thrown.	
•	fid = SIMView.FID_DF_TELECOM	Shall return 20.	
	fci[0] = fci[1] = '05'	fci shall contain the first 20 bytes of	
	<pre>fciOffset = 2 fciLength = 20</pre>	the FCI structure starting at index	
	select()	2. The first two bytes shall (still)	
<u></u>		have the value '05'.	
7	Select EF _{FDN} in DF _{TELECOM} (Linear FixedEF)	No exception shall be thrown.	
	<pre>fid = SIMView.FID_EF_FDN fciOffset = 0</pre>	Shall return 15.	
1	fciLength = 15	fci shall contain the first 15 bytes of	
	select()	the FCI structure. fci[14] shall have the value 28	
		(length of record).	
8	fci is null	Shall throw	
	fid = SIMView.FID_EF_FDN	java.lang.NullPointerException.	
	<pre>byte[] nullBuffer = null</pre>		
	fciOffset = 0		

ld	Description	API Expectation	APDU Expectation
-	fciLength = 15		т т
9	select() fciOffset < 0	Shall throw	
3	fid = SIMView.FID_EF_FDN	java.lang.ArrayIndexOutOfBoundsE	
	fciOffset = -1 fciLength = 15	xception.	
	select()		
10	fciLength < 0	Shall throw	
	<pre>fid = SIMView.FID_EF_FDN fciOffset = 0</pre>	java.lang.ArrayIndexOutOfBoundsE	
	fciLength = -1	xception.	
11	select() fciOffset + fciLength > fci.length	Shall throw	
' '	fid = SIMView.FID_EF_FDN	java.lang.ArrayIndexOutOfBoundsE	
	fciOffset = 20	xception.	
	<pre>fciLength = 15 select()</pre>		
12	fciOffset >= fci.length	Shall throw	
	<pre>fid = SIMView.FID_EF_FDN fciOffset = 34</pre>	java.lang.ArrayIndexOutOfBoundsE	
	fciLength = 1	xception	
12	select() Selection possibilities	1. No expension shall be through	
13	1 - fid = SIMView.FID_MF	1 – No exception shall be thrown.2 – No exception shall be thrown.	
	fciOffset = 0	3 – No exception shall be thrown.	
	<pre>fciLength = 15 select()</pre>	4 – No exception shall be thrown.	
	2 - fid = SIMView.FID_DF_TELECOM	5 – No exception shall be thrown.6 – No exception shall be thrown.	
	<pre>select() 3 - fid = SIMView.FID_DF_GRAPHICS</pre>	7 – No exception shall be thrown.	
	select()	8 – No exception shall be thrown.	
	4 - fid = SIMView.FID_DF_TELECOM select()	9 - No exception shall be thrown.	
	5 - fid = SIMView.FID_DF_GRAPHICS		
	<pre>select() 6 - fid = SIMView.FID_MF</pre>		
	select()		
	7 - fid = SIMView.FID_DF_GSM select()		
	8 - fid = SIMView.FID_DF_TELECOM		
	select()		
	9 - fid = SIMView.FID_DF_TELECOM select()		
44	- Francisco de la constante de	d. No constitution of all his theory	
14	EF not selected after MF/DF selection 1 - fid = SIMView.FID_MF	1 - No exception shall be thrown.2 - Shall throw	
	select()	sim.access.SIMViewException with	
	<pre>fid = SIMView.FID_EF_ICCID select()</pre>	reason code NO_EF_SELECTED.	
	2 - fid = SIMView.FID_MF		
	<pre>select() readBinary()</pre>		
15	No selection of non-reachable file	1 – No exception shall be thrown.	
	<pre>1 - fid = SIMView.FID_MF select()</pre>	2 – Shall throw	
	2 - fid = SIMView.FID_EF_ACM	sim.access.SIMViewException with reason code FILE_NOT_FOUND.	
10	select()		
16	No record is selected after selecting linear fixed EF	1 – No exception shall be thrown.2 – No exception shall be thrown.	
	1 - fid = SIMView.FID_MF	3 – No exception shall be thrown.	
	<pre>select() 2 - fid = FID_DF_SIMTEST</pre>	4 – Shall throw	
	select()	sim.access.SIMViewException with reason code	
	3 - fid = FID_EF_LARU	RECORD_NUMBER_NOT_AVAIL	
	select() 4 - recNumber = 0	ABLE.	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT		
	readRecord()		

ld	Description	API Expectation	APDU Expectation
17	Record pointer in selected cyclic EF 1 - fid = SIMView.FID_MF select() 2 - fid = FID_DF_SIMTEST select() 3 - fid = FID_EF_CARU select() 4 - byte[] data1 = { 1,2,3 } mode = REC_ACC_MODE_PREVIOUS updateRecord(data1) 5 - fid = FID_EF_CARU select() readRecord(data2) compare data1 to data2	1 - No exception shall be thrown. 2 - No exception shall be thrown. 3 - No exception shall be thrown. 4 - No exception shall be thrown. 5 - The contents of data1 and data2 shall be identical.	APDO Expectation

6.1.1.2.4 Test Coverage

CRR Number	Test Case Number
N1	1-7
N2	3, 5
N3	1, 2, 4, 6, 7
N4	14
N5	16
N6	17
N8	1, 3
N9	1-7, 13
P1	8
P2	9
P3	10
P4	11, 12
C1	15
C2, C3	Not Tested

6.1.1.3 Method select (short fid)

Test Area Reference: API_1_SVW_SLCTS

6.1.1.3.1 Conformance Requirements

The method with the following header shall be compliant to its definition in the API.

public void select(short fid)
throws SIMViewException

Normal execution

CRRN1: If the desired file is selected, no exception is thrown.

CRRN2: After selecting a DF/MF no EF is selected.

CRRN3: After selecting a linear fixed EF no record is selected.

CRRN4: After selecting a cyclic EF the first record which is the last updated record is selected.

CRRN5: The current files (file context) of any other applets shall not be changed [03.19 - §5.2]. This will be tested during the testing of the framework.

CRRN6: The file with a File-ID that matches fid shall be found according to the following selection rules:

- 1) An immediate child EF or DF of the current MF/DF can be selected,
- 2) A sibling DF of the current DF can be selected,
- 3) The current MF/DF it self can be selected,
- 4) The parent MF/DF of the current DF can be selected,

5) The MF can always be selected.

Parameter errors

No requirements.

Context errors

CRRC1: If the file with a File-ID which matches fid could not be found according to the selection rules listed in CCRN6, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.FILE_NOT_FOUND.

CRRC2: If the method call causes a memory problem (e.g. memory access error), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.MEMORY_PROBLEM.

CRRC3: If the method call causes an error to occur that is not expected and thus not handled, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INTERNAL_ERROR.

6.1.1.3.2 Test Suite Files

Additional requirements for the GSM personalisation: None

Test Script: API_1_SVW_SLCTS_1.scr

Test Applet: API_1_SVW_SLCTS_1.java

Load Script: API_1_SVW_SLCTS_1.ldr

Cleanup Script: API_1_SVW_SLCTS_1.clr

Parameter File: API_1_SVW_SLCTS_1.par

6.1.1.3.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
0	SIM Initialisation	Responses ignored.	•
1	Select EF _{ICCID} in MF (Transparent EF) fid = SIMView.FID_EF_ICCID select()	No exception shall be thrown.	
2	<pre>EF not selected after MF/DF selection 1 - fid = SIMView.FID_MF select() fid = SIMView.FID_EF_ICCID select() 2 - fid = SIMView.FID_MF select() readBinary()</pre>	1 - No exception shall be thrown. 2 - Shall throw sim.access.SIMViewException with reason code NO_EF_SELECTED.	
3	No record is selected after selecting linear fixed EF 1 - fid = SIMView.FID_MF select() 2 - fid = FID_DF_SIMTEST select() 3 - fid =FID_EF_LARU select() 4 - recNumber = 0 mode = REC_ACC_MODE_ABSOLUTE_CURRENT readRecord()	1 – No exception shall be thrown. 2 – No exception shall be thrown. 3 – No exception shall be thrown. 4 – Shall throw sim.access.SIMViewException with reason code RECORD_NUMBER_NOT_AVAIL ABLE.	
4	Record pointer in selected cyclic EF 1 - fid = SIMView.FID_MF select() 2 - fid =FID_DF_SIMTEST select() 3 - fid = FID_EF_CARU select() 4 - byte[] data1 = { 1,2,3 } updateRecord(data1) 5 - fid = FID_EF_CARU select() readRecord(data2) compare data1 to data2	 1 - No exception shall be thrown. 2 - No exception shall be thrown. 3 - No exception shall be thrown. 4 - No exception shall be thrown. 5 - The contents of data1 and data2 shall be identical. 	
5	Selection possibilities 1 - fid = SIMView.FID_MF select() 2 - fid = SIMView.FID_DF_TELECOM select() 3 - fid = SIMView.FID_DF_GRAPHICS select() 4 - fid = SIMView.FID_DF_TELECOM select() 5 - fid = SIMView.FID_DF_GRAPHICS select() 6 - fid = SIMView.FID_MF select() 7 - fid = SIMView.FID_MF select() 8 - fid = SIMView.FID_DF_GSM select() 9 - fid = SIMView.FID_DF_TELECOM select() 9 - fid = SIMView.FID_DF_TELECOM select()	1 – No exception shall be thrown. 2 – No exception shall be thrown. 3 – No exception shall be thrown. 4 – No exception shall be thrown. 5 – No exception shall be thrown. 6 – No exception shall be thrown. 7 – No exception shall be thrown. 8 – No exception shall be thrown. 9 – No exception shall be thrown.	
6	No selection of unreachable file 1 - fid = SIMView.FID_MF select() 2 - fid = SIMView.FID_EF_ACM select()	1 – No exception shall be thrown. 2 – Shall throw sim.access.SIMViewException with reason code FILE_NOT_FOUND.	

6.1.1.3.4 Test Coverage

CRR Number	Test Case Number
N1	1
N2	2
N3	3
N4	4
N6	5

CRR Number	Test Case Number	
C1	6	
C2, C3	Not Tested	

6.1.1.4 Method status

Test Area Reference: API_1_SVW_STAT_BSS

6.1.1.4.1 Conformance Requirements

The method with the following header shall be compliant to its definition in the API.

Normal execution

CRRN1: The FCI (File Control Information) of the current DF (or MF) is returned in the same format as for a SELECT command in case of selecting an MF/DF (described in GSM 03.19 [7], §9.2.1).

CRRN2: If the length fciLength is greater than or equal to the length of the FCI structure, the whole FCI structure is copied into the array fci and the length of the FCI which has been written to the array fci is returned.

CRRN3: If the length fciLength is less than the length of the FCI structure, the first part of the FCI structure is copied into the array fci and the length of the FCI which has been written to the array fci is returned.

Parameter errors

CRRP1: If the array fci is null, an instance of NullPointerException shall be thrown.

CRRP2: If fciOffset is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.

CRRP3: If fciLength is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.

CRRP4: If fciOffset plus fciLength is greater than the length of the array fci.length, or fciOffset equals fci.length, an instance of ArrayIndexOutOfBoundsException shall be thrown.

Context errors

CRRC1: If the method call causes a memory problem (e.g. memory access error), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.MEMORY PROBLEM.

CRRC2: If the method call causes an error to occur that is not expected and thus not handled, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INTERNAL ERROR.

6.1.1.4.2 Test Suite Files

Additional requirements for the GSM personalisation:

Test Script: API_1_SVW_STAT_BSS_1.scr

Test Applet: API_1_SVW_STAT_BSS_1.java

Load Script: API_1_SVW_STAT_BSS_1.ldr

Cleanup Script: API_1_SVW_STAT_BSS_1.clr

Parameter File: API_1_SVW_STAT_BSS_1.par

6.1.1.4.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
0	SIM Initialisation	Responses ignored.	•
1	Status of MF	No exception shall be thrown.	
	<pre>byte[] fci = new byte[34] fciOffset = 0</pre>	Shall return 7.	
	fciLength = 7	fci shall contain the entire FCI structure.	
	status()	<pre><description fci:<="" of="" pre=""></description></pre>	
		XX XX	
		XX XX	
		3F 00	
		01	
2	Status after select EF _{ICCID} in MF	> 1 - No exception shall be thrown.	
-	1 - fid = SIMView.FID_DF_GSM	Shall return a value between 22	
	fciOffset = 0	and 34.	
	fciLength = 34	2 - No exception shall be thrown.	
	<pre>len = select() 2 - byte[] fci2 = new byte[34]</pre>	Shall return 22 or more.	
	12 12 12 12 12 12 12 12 12 12 12 12 12 1	3 - len and len2 shall be identical	
	len2 = status()	4 - fci and fci2 shall be identical	
	3 - Compare len and len2 4 - Compare the len bytes of fci and fci2		
3	Status of DF _{Telecom}	1 - No exception shall be thrown.	
	1 - fid = SIMView.FID_DF_TELECOM	Shall return a value between 22	
	<pre>select() 2 - fciOffset = 0</pre>	and 34.	
	fciLength = 100	2 - No exception shall be thrown.	
	status()	Shall return a value between 22 and 34.	
		fci shall contain the entire FCI	
		structure (check that returned value	
		is equal to 13 plus the "length of	
		following data" - fci[12]).FID of the	
		returned fci (fci[4:5]) is	
		FID_DF_TELECOM.	
4	Status DF _{TELECOM}	No exception shall be thrown.	
	fciOffset = 0	Shall return 7.	
	fciLength = 7	fci shall contain the first 7 bytes of	
	status()	the FCI structure starting at index	
		0.	
		FID of the returned fci (fci[4:5]) is FID_DF_TELECOM.	
5	fci is null	Shall throw	
	<pre>byte[] nullBuffer = null</pre>	java.lang.NullPointerException.	
	<pre>fciOffset = 0 fciLength = 34</pre>		
	status()		
6	fciOffset < 0	Shall throw	
	fciOffset = -1	java.lang.ArrayIndexOutOfBoundsE	
	<pre>fciLength = 34 status()</pre>	xception.	
7	fciLength < 0	Shall throw	
	fciOffset = 0	java.lang.ArrayIndexOutOfBoundsE	
	<pre>fciLength = -1 status()</pre>	xception.	
8	fciOffset + fciLength > fci.length	Shall throw	
	fciOffset = 20	java.lang.ArrayIndexOutOfBoundsE	
	fciLength = 15	xception.	
9	status() fciOffset >= fci.length	Shall throw	
Э	fciOffset = 34	java.lang.ArrayIndexOutOfBoundsE	
	fciLength = 1	xception.	
	status()	'	

6.1.1.4.4 Test Coverage

CRR Number	Test Case Number
N1	1-4
N2	2, 3
N3	1, 4
P1	5
P2	6
P3	7
P4	8, 9
C1, C2	Not Tested

- 6.1.1.5 Method readBinary

Test Area Reference: API_1_SVW_REDBS_BSS

6.1.1.5.1 Conformance Requirements

The method with the following header shall be compliant to its definition in the API.

Normal execution

CRRN1: If data can be accessed at the specified offset, the value respOffset plus respLength are returned and the data bytes of the currently selected transparent file are returned in resp.

Parameter errors

CRRP1: If fileOffset is less than 0, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.OUT_OF_FILE_BOUNDARIES.

CRRP2: If fileOffset plus respLength exceeds the length of the file, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.OUT_OF_FILE_BOUNDARIES.

CRRP3: If the array resp is null, an instance of NullPointerException shall be thrown.

CRRP4: If respOffset is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.

CRRP5: If respLength is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.

CRRP6: If respOffset plus respLength is greater than the length of the array resp.length, an instance of ArrayIndexOutOfBoundsException shall be thrown.

Context errors

CRRC1: If the calling applet has currently no EF selected, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.NO_EF_SELECTED.

CRRC2: If the currently selected EF is not transparent, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.FILE INCONSISTENT.

CRRC3: If the calling applet does not fulfil the access condition, READ, to perform this function, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.AC_NOT_FULFILLED.

- CRRC4: If the currently selected EF is invalidated and the file status of the EF does not allow for the reading of an invalidated file, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INVALIDATION_STATUS_CONTRADICTION.
- CRRC5: If the method call causes a memory problem (e.g. memory access error), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.MEMORY_PROBLEM.

CRRC6: If the method call causes an error to occur that is not expected and thus not handled, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INTERNAL_ERROR.

6.1.1.5.2 Test Suite Files

Additional requirements for the GSM personalisation: none.

Test Script: API_1_SVW_REDBS_BSS_1.scr

Test Applet: API_1_SVW_REDBS_BSS_1.java

Load Script: API_1_SVW_REDBS_BSS_1.ldr

Cleanup Script: API_1_SVW_REDBS_BSS_1.clr

Parameter File: API_1_SVW_REDBS_BSS_1.par

6.1.1.5.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
0	SIM Initialisation	Responses ignored	
1	Read from EFICCID in MF (Transparent EF) 1 - fid = SIMView.FID_EF_ICCID select() 2 - fileOffset = 0 byte[] resp = new byte[20] resp[0:19] = '55' respOffset = 10 respLength = 10 readBinary()	1 - No exception shall be thrown. 2 - No exception shall be thrown. Shall return 20. resp shall contain the entire contents of EFICCID starting at index 10. <description 0f="" 55="" ff="" of="" resp:=""></description>	
2	Read from EFICCID in MF resp[0:19] = '55' fileOffset = 5 respOffset = 10 respLength = 5 readBinary()	No exception shall be thrown. Shall return 15. resp shall contain the last 5 bytes of EFICCID starting at index 10. <description 55="" ff="" of="" resp:=""></description>	
3	Offset into File out of bounds fileOffset = -1 respOffset = 0 respLength = 10 readBinary()	Shall throw sim.access.SIMViewException with reason code OUT_OF_FILE_BOUNDARIES.	
4	<pre>fileOffset + respLength > EF length fileOffset = 9 respOffset = 0 respLength = 2 readBinary()</pre>	Shall throw sim.access.SIMViewException with reason code OUT_OF_FILE_BOUNDARIES.	
5	<pre>resp is null byte[] nullBuffer = null fileOffset = 0 respOffset = 0 respLength = 10 readBinary()</pre>	Shall throw java.lang.NullPointerException.	

tation

6.1.1.5.4 Test Coverage

CRR Number	Test Case Number
N1	1-2
P1	3
P2	4
P3	5
P4	6
P5	7
P6	8,
C1	12
C2	9
C3	10
C4	11
C5, C6	Not Tested

- 6.1.1.6 Method updateBinary

Test Area Reference: API_1_SVW_UPDBS_BSS

6.1.1.6.1 Conformance Requirements

The method with the following header shall be compliant to its definition in the API.

Normal execution

CRRN1: The currently selected transparent file is updated starting at fileOffset, with the string of dataLength bytes in the array data starting at dataOffset.

Parameter errors

- CRRP1: If fileOffset is less than 0, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.OUT_OF_FILE_BOUNDARIES.
- CRRP2: If fileOffset plus dataLength exceeds the length of the file, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.OUT_OF_FILE_BOUNDARIES.
- CRRP3: If the array data is null, an instance of NullPointerException shall be thrown.
- CRRP4: If dataOffset is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP5: If dataLength is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP6: If dataOffset plus dataLength greater than the length of the array data.length an instance of ArrayIndexOutOfBoundsException shall be thrown.

Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.NO EF SELECTED.
- CRRC2: If the currently selected EF is not transparent, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.FILE_INCONSISTENT.
- CRRC3: If the calling applet does not fulfil the access condition, UPDATE, to perform this function, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.AC NOT FULFILLED.
- CRRC4: If the currently selected EF is invalidated and the file status of the EF does not allow for updating of an invalidated file, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INVALIDATION_STATUS_CONTRADICTION.
- CRRC5: If the method call causes a memory problem (e.g. memory access error), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.MEMORY_PROBLEM.
- CRRC6: If the method call causes an error to occur that is not expected and thus not handled, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INTERNAL_ERROR.

6.1.1.6.2 Test Suite Files

Additional requirements for the GSM personalisation: None

Test Script: API_1_SVW_UPDBS_BSS_1.scr

Test Applet: API_1_SVW_UPDBS_BSS_1.java

Load Script: API_1_SVW_UPDBS_BSS_1.ldr

Cleanup Script: API_1_SVW_UPDBS_BSS_1.clr

Parameter File: API 1 SVW UPDBS BSS 1.par

6.1.1.6.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
0	SIM Initialisation	Responses ignored.	
1	No EF selected	Shall throw	
	fileOffset = 0	sim.access.SIMViewException with	
	byte[] data = new byte[20]	reason code NO_EF_SELECTED.	
	data[0] = '55'		
	dataOffset = 0		
	dataLength = 10		
_	updateBinary()	4 1 1 1 1	
2	Update Transparent EF	1 – No exception shall be thrown.	
	1 - fid = DFSIMTEST	2 – No exception shall be thrown.	
	<pre>select() 2 - fid = EFTARU</pre>	3 – No exception shall be thrown.	
		4 – No exception shall be thrown.	
	3 - fileOffset = 3	Data in resp[0] shall be '55'.	
	data[0] = '55'		
	dataOffset = 0		
	dataLength = 1		
	updateBinary()		
	4 - fileOffset = 3		
	respOffset = 0		
	respLength = 1		
_	readBinary()	4 1 1 1 1	
3	1 - fileOffset = 254	1 - No exception shall be thrown.	
	data[0] = '55'	2 - No exception shall be thrown.	
	data[1] = 'AA' data[2] = '66'	Data in resp shall be	
	dataOffset = 0	resp[0] = '55'	
	dataLength = 3	resp[1] = 'AA'	
	updateBinary()	resp[2] = '66'	
	2 - fileOffset = 254		
	respOffset = 0		
	respLength = 3		
	readBinary()		
4	Offset into File out of bounds	Shall throw	
	fileOffset = -1	sim.access.SIMViewException with	
	dataOffset = 0	reason code	
	dataLength = 10	OUT_OF_FILE_BOUNDARIES.	
5	updateBinary() fileOffset + dataLength > EF length	Shall throw	
٥	fileOffset = 259		
	dataOffset = 0	sim.access.SIMViewException with	
	dataLength = 2	reason code	
	updateBinary()	OUT_OF_FILE_BOUNDARIES.	
6	data is null	Shall throw	
1	byte[] nullBuffer = null	java.lang.NullPointerException.	
	fileOffset = 0	,	
	dataOffset = 0		
	dataLength = 10		
L	updateBinary()		
7	dataOffset < 0	Shall throw	
	fileOffset = 0	java.lang.	
	1	ArrayIndexOutOfBoundsException.	
	<pre>dataOffset = -1 dataLength = 10</pre>		
L	updateBinary()		

8	
dataOffset = 0 dataLength = -1 updateBinary() 9	
dataLength = -1 updateBinary() 9	
dataLength = -1 updateBinary() 9	ception.
9 dataOffset + dataLength > data.length Shall throw	
fileOffset = 0 liava.lang.	
1 1 · · ·	
dataOffset = 10 ArrayIndexOutOfBoundsExc	ception.
updateBinary()	
10 EF is not Transparent 1 - No exception shall be thr	rown
1 - fid = FID_DF_SIMTEST 2 - No exception shall be thr	
	iowii.
2 - fid = FID_EF_LARU sim.access.SIMViewExcepti	tion with
select()	tion with
3 - fileOffset = 0 reason code	
data[0] = '55'	
dataOffset = 0	
dataLength = 1	
updateBinary()	
11 Access condition not fulfilled 1 - No exception shall be thr	rown.
Z Orian thow	
Silliaccess.SilviviewExcepti	tion with
reason code	
2 - fileOffset = 0 AC_NOT_FULFILLED.	
data[0] = '55'	
dataOffset = 0	
dataLength = 1	
updateBinary()	
12 EF is invalidated 1 - No exception shall be thr	rown.
1 - fid = EFTNR 2 - Shall throw	
invalidate() 2 - fileOffset = 0	tion with
data[0] = 1551	
dataOffset = 0 INVALIDATION_STATUS_C	CONTR
dataLength = 1 ADICTION.	
updateBinary() 3 - No exception shall be thr	rown.
3 - rehabilitate()	

6.1.1.6.4 Test Coverage

CRR Number	Test Case Number
N1	2, 3
P1	4
P2	5
P3	6
P4	7
P5	8
P6	9
C1	1
C2	10
C3	11
C4	12
C5, C6	Not Tested

6.1.1.7 Method readRecord

Test Area Reference: API_1_SVW_REDRSBS_BSS

6.1.1.7.1 Conformance Requirements

The method with the following header shall be compliant to its definition in the API.

short respLength)
throws java.lang.NullPointerException,
 java.lang.ArrayIndexOutOfBoundsException,
 SIMViewException

Normal execution

CRRN1: The data bytes from the record, specified by mode and recNumber of the currently selected linear fixed or cyclic EF, is read at recOffset. A total of respLength bytes of this data is copied to the array resp at respOffset.

CRRN2: If the access mode is REC ACC MODE ABSOLUTE CURRENT:

- if recNumber is not 0, the record addressed by recNumber will be read;
- if recNumber is 0 the current selected record will be read; and
- the current record pointer shall not change.

CRRN3: If the access mode is REC ACC MODE NEXT:

- the next record relative to the current selected record will be selected and read;
- if no current record is selected, the first record will be selected and read;
- if the current record pointer is set to the last record for a cyclic EF the record pointer is set to the first record and the record is read;
- the current record pointer of any other applet shall not be changed.

CRRN4: If the access mode is REC_ACC_MODE_PREVIOUS:

- the previous record relative to the current selected record will be selected and read;
- if no current record is selected, the last record will be selected and read;
- if the current record pointer is set to the first record, for a linear fixed EF the method responses with an error exception and for a cyclic EF the record pointer is set to the last record and the record is read;
- the current record pointer of any other applet shall not be changed.

Parameter errors

CRRP1: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE_ABSOLUTE_CURRENT and recNumber is less than 0 or greater than records available, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.RECORD_NUMBER_NOT_AVAILABLE.

CRRP2: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE_ABSOLUTE_CURRENT, recNumber is 0 and there is no current record selected, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.RECORD_NUMBER_NOT_AVAILABLE.

CRRP3: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE_NEXT and the current record pointer is set to the last record, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.RECORD_NUMBER_NOT_AVAILABLE.

CRRP4: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE_PREVIOUS and the current record pointer is set to the first record, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.RECORD_NUMBER_NOT_AVAILABLE.

- CRRP5: If the specified offset into the selected record recOffset is less than 0, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.OUT_OF_RECORD_BOUNDARIES.
- CRRP6: If recOffset plus respLength is greater than the record length, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.OUT_OF_RECORD_BOUNDARIES.
- CRRP7: If the access mode is not between 2 and 4 inclusive (2 = REC_ACC_MODE_NEXT, etc.), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INVALID_MODE.
- CRRP8: If the array resp is null, an instance of NullPointerException shall be thrown.
- CRRP9: If respOffset is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP10: If respLength is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP11: If respOffset plus respLength is greater than the length of the array resp.length, or respOffset equals resp.length, an instance of ArrayIndexOutOfBoundsException shall be thrown.

Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.NO_EF_SELECTED.
- CRRC2: If the currently selected EF is neither linear fixed nor cyclic, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.FILE_INCONSISTENT.
- CRRC3: If the calling applet does not fulfil the access condition, READ, to perform this function, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.AC_NOT_FULFILLED.
- CRRC4: If the currently selected EF is invalidated and the file status of the EF does not allow for reading an invalidated file, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INVALIDATION_STATUS_CONTRADICTION.
- CRRC5: If the method call causes a memory problem (e.g. memory access error), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.MEMORY_PROBLEM.
- CRRC6: If the method call causes an error to occur that is not expected and thus not handled, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INTERNAL_ERROR.

6.1.1.7.2 Test Suite Files

Additional requirements for the GSM personalisation: None

Test Script: API_1_SVW_REDRSBS_BSS_1.scr

Test Applet: API_1_SVW_REDRSBS_BSS_1.java

Load Script: API_1_SVW_REDRSBS_BSS_1.ldr

Cleanup Script: API_1_SVW_REDRSBS_BSS_1.clr

Parameter File: API_1_SVW_REDRSBS_BSS_1.par

6.1.1.7.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
0	SIM Initialisation	Responses ignored.	
1	No EF selected	Shall throw	
	recNumber = 1	sim.access.SIMViewException with	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT	reason code NO_EF_SELECTED.	
	recOffset = 0		
	byte[] resp = new byte[20]		
	respOffset = 0		
	respLength = 10		
	readRecord()		
2	Read Absolute and Current from Linear Fixed		
	EF	2 - No exception shall be thrown.	
	1 - fid = DFSIMTEST	3 - No exception shall be thrown.	
	select()	resp shall be:	
	2 - fid = EFLARU	resp[0] = '55'	
	select()	resp[1] = '55'	
	// Record pointer not set.	resp[2] = '55'	
	3 - recNumber = 0	resp[3] = '55'	
	<pre>mode = REC_ACC_MODE_NEXT recOffset = 0</pre>	4 - No exception shall be thrown.	
	respOffset = 0	resp shall be:	
	respLength = 4		
	readRecord()	resp[0] = 'AA'	
	4 - recNumber = 2	resp[1] = 'AA'	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT	resp[2] = 'AA'	
	readRecord()	resp[3] = 'AA'	
	5 - recNumber = 1	5 - No exception shall be thrown.	
	readRecord()	resp shall be:	
	6 - recNumber = 0	resp[0] = '55'	
	resp[0] = resp[1] = resp[2] = resp[3] =	resp[1] = '55'	
	'00'	resp[2] = '55'	
	readRecord()	resp[3] = '55'	
		6 - No exception shall be thrown.	
		resp shall be:	
		resp[0] = '55'	
		resp[1] = '55'	
		resp[2] = '55'	
		resp[3] = '55'	
3	Read Next from Linear Fixed EF	No exception shall be thrown.	
	recNumber = 0	resp shall be:	
	mode = REC_ACC_MODE_NEXT	resp[0] = 'AA'	
	recOffset = 0	resp[1] = 'AA'	
	respOffset = 0 respLength = 4	resp[2] = 'AA'	
	readRecord()	resp[3] = 'AA'	
	leadrecord()		
4	Read Next from Linear Fixed EF	Shall throw	
'	recNumber = 0	sim.access.SIMViewException with	
	mode = REC_ACC_MODE_NEXT	reason code	
	recOffset = 0	RECORD_NUMBER_NOT_AVAIL	
	respOffset = 0	ABLE.	
	respLength = 4	ADLE.	
	readRecord()		
5	Read Previous from Linear Fixed EF	No exception shall be thrown.	
	recNumber = 0	resp shall be:	
	mode = REC_ACC_MODE_PREVIOUS	resp[0] = '55'	
	recOffset = 0	resp[1] = '55'	
	respOffset = 0	resp[2] = '55'	
	respLength = 4	resp[3] = '55'	
	readRecord()	1000[0] = 00	
-	Pood Provious from Linear Fixed EF	Chall throw	
6	Read Previous from Linear Fixed EF recNumber = 0	Shall throw	
	mode = REC_ACC_MODE_PREVIOUS	sim.access.SIMViewException with	
	mode = REC_ACC_MODE_PREVIOUS recOffset = 0	reason code	
	recollset = 0 respOffset = 0	RECORD_NUMBER_NOT_AVAIL	
	respLength = 4	ABLE.	
	readRecord()		
Щ	I Caanceora ()		

ld	Description	API Expectation	APDU Expectation
7	Read Absolute and Current from Cyclic EF	1 - No exception shall be thrown.	•
	1 - fid = EFCARU	2 - No exception shall be thrown.	
	select()	resp shall be:	
	2 - recNumber = 2 mode = REC_ACC_MODE_ABSOLUTE_CURRENT	resp[0] = ' AA'	
	recOffset = 0	resp[1] = ' AA'	
	respOffset = 0	resp[2] = ' AA'	
	respLength = 3	3 - No exception shall be thrown.	
	readRecord()	resp shall be:	
	3 - recNumber = 1	resp[0] = '55'	
	readRecord() 4 - recNumber = 0	resp[1] = '55'	
	resp[0] = resp[1] = resp[2] = '00	resp[2] = '55'	
	readRecord()	4 - No exception shall be thrown.	
		resp shall be:	
		resp[0] = '55'	
		resp[1] = '55'	
	5 111 11 5 5 5	resp[2] = '55'	
8	Read Next from Cyclic EF	No exception shall be thrown.	
	recNumber = 0 mode = REC_ACC_MODE_NEXT	resp shall be:	
	recOffset = 0	resp[0] = 'AA'	
	respOffset = 0	resp[1] = 'AA'	
	respLength = 3	resp[2] = 'AA'	
<u> </u>	readRecord()		
9	Read Next from Cyclic EF	No exception shall be thrown.	
	recNumber = 0 mode = REC_ACC_MODE_NEXT	resp shall be:	
	recOffset = 0	resp[0] = '55'	
	respOffset = 0	resp[1] = '55'	
	respLength = 3	resp[2] = '55'	
	readRecord()		
10	Read Previous from Cyclic EF	No exception shall be thrown.	
	recNumber = 0 mode = REC_ACC_MODE_PREVIOUS	resp shall be:	
	recOffset = 0	resp[0] = 'AA'	
	respOffset = 0	resp[1] = 'AA'	
	respLength = 3	resp[2] = 'AA'	
	readRecord()		
11	Read Previous from Cyclic EF	No exception shall be thrown.	
	recNumber = 0 mode = REC_ACC_MODE_PREVIOUS	resp shall be:	
	recOffset = 0	resp[0] = '55'	
	respOffset = 0	resp[1] = '55'	
	respLength = 3	resp[2] = '55'	
L	readRecord()		
12	Read Absolute from Linear Fixed EF beyond	1 – No exceptionshall be thrown.	
	Records 1 - fid = EFLARU	2 - Shall throw	
	-	sim.access.SIMViewException with	
	2 - recNumber = -1	reason code RECORD_NUMBER_NOT_AVAIL	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT	ABLE.	
	recOffset = 0	3 - Shall throw	
	respOffset = 0 respLength = 4	sim.access.SIMViewException with	
	resplength = 4 readRecord()	reason code	
	3 - recNumber = 3	RECORD_NUMBER_NOT_AVAIL	
	readRecord()	ABLE.	
13	No current record in linear fixed EF, read	1 - No exception shall be thrown.	
-	current	2 - Shall throw	
	1 - fid = EFLARU	sim.access.SIMViewException with	
	select() // No curr rec	reason code	
	2 - recNumber = 0 // curr rec mode = REC_ACC_MODE_ABSOLUTE_CURRENT	RECORD_NUMBER_NOT_AVAIL	
	recOffset = 0	ABLE.	
	respOffset = 0		
	respLength = 4		
	readRecord()		

ld	Description	API Expectation	APDU Expectation
14	recOffset < 0	1 - No exception shall be thrown.	
	1 - fid = EFLARU	2 - Shall throw	
	select()	sim.access.SIMViewException with	
	2 - recNumber = 1 // rec 1	reason code	
	<pre>mode = REC_ACC_MODE_ABSOLUTE_CURRENT recOffset = -1</pre>	OUT_OF_RECORD_BOUNDARIE	
	respOffset = 0	S.	
	respLength = 4		
	readRecord()		
15	recOffset + respLength > Record Length	1 - No exception shall be thrown.	
	1 - fid = EFLARU	2 - Shall throw	
	select() 2 - recNumber = 1	sim.access.SIMViewException with	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT	reason code	
	recOffset = 2	OUT_OF_RECORD_BOUNDARIE	
	respOffset = 0	S.	
	respLength = 4		
16	readRecord() Reading with invalid mode	1 - No exception shall be thrown.	
10	1 - fid = EFLARU	2 - Shall throw	
	select()	sim.access.SIMViewException with	
	2 - recNumber = 0	reason code INVALID_MODE.	
	mode = 1	3 - Shall throw	
	recOffset = 0 respOffset = 0	sim.access.SIMViewException with	
	respLength = 4	reason code INVALID_MODE.	
	readRecord()		
	3 - mode = 5		
47	readRecord()		
17	<pre>resp is null byte[] nullBuffer = null</pre>	Shall throw	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT	java.lang.NullPointerException.	
	respOffset = 0		
	respLength = 10		
40	readRecord()	Chall throw	
18	respOffset < 0	Shall throw	
	respOffset = -1	java.lang. ArrayIndexOutOfBoundsException.	
	respLength = 10	ArrayindexOdiOiBodildsException.	
	readRecord ()		
19	respLength < 0	Shall throw	
	respOffset = 0 respLength = -1	java.lang.	
	readRecord ()	ArrayIndexOutOfBoundsException.	
20	respOffset + respLength > resp.length	Shall throw	
	respOffset = 10	java.lang.	
	respLength = 11	ArrayIndexOutOfBoundsException.	
21	readRecord () EF is neither Cyclic nor Linear Fixed	1 - No exception shall be thrown.	
4	1 - fid = DFSIMTEST	2 - No exception shall be thrown.	
	select()	3 - Shall throw	
	2 - fid = EFTNU	sim.access.SIMViewException with	
	select()	reason code	
	<pre>3 - respOffset = 0 respLength = 4</pre>	FILE_INCONSISTENT.	
	readRecord()		
22	Access condition not fulfilled	1 - No exception shall be thrown.	
	1 - fid = EFCNR	2 - Shall throw	
	select()	sim.access.SIMViewException with	
	<pre>2 - respLength = 3 readRecord()</pre>	reason code	
		AC_NOT_FULFILLED.	
23	EF is invalidated	1 - No exception shall be thrown.	
	<pre>1 - fid = EFCNU invalidate()</pre>	2 - Shall throw	
	2 - readRecord()	sim.access.SIMViewException with	
	3 - rehabilitate()	reason code	
		INVALIDATION_STATUS_CONTR ADICTION.	
		3 - No exception shall be thrown.	
L	L	o No exception shall be tillown.	

6.1.1.7.4 Test Coverage

CRR Number	Test Case Number
N1	2-5, 7-11
N2	2, 7
N3	3, 8, 9
N4	5, 10, 11
P1	12
P2	13
P3	4
P4	6
P5	14
P6	15
P7	16
P8	17
P9	18
P10	19
P11	20
C1	1
C2	21
C3	22
C4	23
C5, C6	Not Tested

- 6.1.1.8 Method updateRecord

Test Area Reference: API_1_SVW_UPDRSBS_BSS

6.1.1.8.1 Conformance Requirements

The method with the following header shall be compliant to its definition in the API.

Normal execution

CRRN1: dataLength bytes of the record specified by mode and recNumber of the current selected linear fixed or cyclic EF are updated at recOffset, by using the string of bytes in the array data starting at dataOffset.

CRRN2: If the access mode is REC_ACC_MODE_ABSOLUTE_CURRENT and the file is a linear fixed EF:

- the record addressed by recNumber will be updated;
- if recNumber is 0 the current selected record will be updated; and
- the current record pointer shall not change.

CRRN3: If the access mode is REC_ACC_MODE_NEXT and the file is a linear fixed EF:

- the next record relative to the current selected record will be selected and updated;
- if no current record is selected, the first record will be selected and updated;
- the current record pointer of any other applet shall not be changed.

CRRN4: If the access mode is REC_ACC_MODE_PREVIOUS:

- the previous record relative to the current selected record will be selected and updated;
- if no current record is selected, the last record will be selected and updated;
- if a cyclic EF is updated, the oldest record will be updated independent of the current record pointer and this record becomes record number 1 and the current record;
- the current record pointer of any other applet shall not be changed in case of a linear fixed EF.

Parameter errors

- CRRP1: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE_ABSOLUTE_CURRENT and recNumber is less than 0 or greater than records available, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.RECORD_NUMBER_NOT_AVAILABLE.
- CRRP2: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE_ABSOLUTE_CURRENT, recNumber is 0 and there is no current record selected, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.RECORD_NUMBER_NOT_AVAILABLE.
- CRRP3: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE_NEXT and the current record pointer is set to the last record, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.RECORD_NUMBER_NOT_AVAILABLE.
- CRRP4: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE_PREVIOUS and the current record pointer is set to the first record; an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.RECORD_NUMBER_NOT_AVAILABLE.
- CRRP5: If the specified offset into the selected record recOffset is less than 0, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.OUT_OF_RECORD_BOUNDARIES.
- CRRP6: If recOffset plus dataLength is greater than the record lengh, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.OUT_OF_RECORD_BOUNDARIES.
- CRRP7: If the access mode is not between 2 and 4 inclusive (2 = REC_ACC_MODE_NEXT, etc.), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INVALID_MODE.
- CRRP8: If the currently selected EF is cyclic and the mode of record access mode is not REC_ACC_MODE_PREVIOUS, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INVALID_MODE.
- CRRP9: If the array data is null, an instance of NullPointerException shall be thrown.
- CRRP10: If dataOffset is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP11: If dataLength is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP12: If dataOffset plus dataLength, is greater than the length of the array data.length, or dataOffset equals data.length, an instance of ArrayIndexOutOfBoundsException shall be thrown.

Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.NO_EF_SELECTED.
- CRRC2: If the currently selected EF is neither linear fixed nor cyclic, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.FILE_INCONSISTENT.
- CRRC3: If the calling applet does not fulfil the access condition, UPDATE, to perform this function, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.AC_NOT_FULFILLED.
- CRRC4: If the currently selected EF is invalidated and the file status of the EF does not allow for updating an invalidated file, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INVALIDATION_STATUS_CONTRADICTION.
- CRRC5: If the method call causes a memory problem (e.g. memory access error), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.MEMORY_PROBLEM.
- CRRC6: If the method call causes an error to occur that is not expected and thus not handled, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INTERNAL_ERROR.

6.1.1.8.2 Test Suite Files

Additional requirements for the GSM personalisation: This test is based on the assumption that the contents of the EFs in $DF_{SIMTEST}$ are identical to those defined in the default pre-personalisation and the current record pointers have not been altered.

Test Script: API_1_SVW_UPDRSBS_BSS_1.scr

Test Applet: API_1_SVW_UPDRSBS_BSS_1.java

Load Script: API_1_SVW_UPDRSBS_BSS_1.ldr

Cleanup Script: API_1_SVW_UPDRSBS_BSS_1.clr

Parameter File: API_1_SVW_UPDRSBS_BSS_1.par

6.1.1.8.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
0	SIM Initialisation	Responses ignored.	2 — - p =
1	No EF selected	Shall throw	
	recNumber = 1	sim.access.SIMViewException with	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT	reason code NO_EF_SELECTED.	
	recOffset = 0		
	<pre>byte[] data = new byte[20] dataOffset = 0</pre>		
	dataLength = 10		
	updateRecord()		
2	Update Absolute and Current from Linear	1 - No exception shall be thrown.	= 4
	Fixed EF	2 - No exception shall be thrown.	
	1 - fid = DFSIMTEST	3 - No exception shall be thrown.	
	select()	Resp shall be:	
	2 - fid = EFLARU	Resp[0] = '11'	
	select()	Resp[1] = '11'	
	// Record pointer not set.	Resp[2] = '11'	
	3 - recNumber = 2	Resp[3] = '11'	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT		
	data[0:3] = '11'		
	recOffset = 0		
	dataOffset = 0		
	dataLength = 4		
	updateRecord()		
	respOffset = 0 respLength = 0		
	resplength = 0 readRecord()		
	reduceora()		
3	Update Current from Linear Fixed EF	1 - No exception shall be thrown.	
	1 - fid = DFSIMTEST	2 - No exception shall be thrown.	
	select()	3 - No exception shall be thrown.	
	2 - fid = EFLARU	4 - No exception shall be thrown.	
	select()	resp shall be:	
	<pre>// Set record pointer with mode "next". 3 - recNumber = 0</pre>	resp[0] = '22'	
	mode = REC_ACC_MODE_NEXT	resp[1] = '22'	
	recOffset = 0	resp[2] = '22'	
	data[0:3] = '00'	resp[3] = '22'	
	dataOffset = 0		
	dataLength = 4		
	updateRecord()		
	<pre>// write data with mode "current" 4 - recNumber = 0</pre>		
	data[0:3] = '22'		
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT		
	updateRecord()		
	// read result with mode "absolute"		
	respOffset = 0		
	respLength = 4 recNumber = 1		
	recnumber = 1 mode = REC_ACC_MODE_ABSOLUTE_CURRENT		
	readRecord()		
4	Update Next from Linear Fixed EF, no record	1 - No exception shall be thrown.	
'	pointer set	2- No exception shall be thrown.	
	1 - fid = FID_DF_SIMTEST	3 - No exception shall be thrown.	
	select()	Resp shall be:	
	2 - fid = FID_EF_LARU	Resp[0] = '33'	
	select	Resp[1] = '33'	
	3 - recNumber = 0	Resp[2] = '33'	
	mode = REC_ACC_MODE_NEXT	Resp[3] = '33'	
	recOffset = 0 data[0:3] = '33'		
	dataOffset = respOffset = 0		
	dataLength = respLength = 4		
	updateRecord()		
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT		
	readRecord()		
5	Update Next from Linear Fixed EF, record	1 - No exception shall be thrown.	
	pointer set	2 - No exception shall be thrown.	
	1 - recNumber = 0	resp shall be:	
	mode = REC_ACC_MODE_NEXT	resp[0] = '44'	

ld	Description	API Expectation	APDU Expectation
		resp[1] = '44'	
	data[0:3] = '44'	resp[2] = '44'	
		resp[3] = '44'	
	dataLength = 4	Cop[o] = ++	
	updateRecord()		
	2 - mode = REC_ACC_MODE_ABSOLUTE_CURRENT		
	readRecord()		

ld	Description	API Expectation	APDU Expectation
6	Update Next from Linear Fixed EF, no more	Shall throw	p - commen
	records	sim.access.SIMViewException with	
	recNumber = 0	reason code	
	<pre>mode = REC_ACC_MODE_NEXT recOffset = 0</pre>	RECORD_NUMBER_NOT_AVAIL	
	data[0:3] = '55'	ABLE.	
	dataOffset = 0		
	dataLength = 4		
	updateRecord()	4 1 11 11	
7	Update Previous from Linear Fixed EF, no record pointer set	1 - No exception shall be thrown.2 - No exception shall be thrown.	
	1 - fid = DFSIMTEST	3 - No exception shall be thrown.	
	select()	4 - No exception shall be thrown.	
	2 - fid = EFLARU	resp shall be:	
	<pre>select() 3 - recNumber = 0</pre>	resp[0] = '66'	
	mode = REC_ACC_MODE_PREVIOUS	resp[1] = '66'	
	recOffset = 0	resp[2] = '66'	
	data[0:3] = '66'	resp[3] = '66'	
	dataOffset = respOffset = 0		
	<pre>dataLength = respLength = 4 updateRecord()</pre>		
	4 - mode = REC_ACC_MODE_ABSOLUTE_CURRENT		
_	readRecord()		
8	Update Previous from Linear Fixed EF, record	1 - No exception shall be thrown	
	pointer set	2 - No exception shall be thrown.	
	1 - recNumber = 0 mode = REC_ACC_MODE_PREVIOUS	Resp shall be: Resp[0] = '7744'	
	recOffset = 0	Resp[0] = 7744 Resp[1] = '7744'	
	data[0:3] = '77'	Resp[1] = 7744 Resp[2] = '7744'	
	<pre>dataOffset = respOffset = 0 dataLength = respLength = 4</pre>	Resp[3] = '7744'	
	updateRecord()	in a piece of the control of the con	
	readRecord()		
<u> </u>	2 - mode = REC_ACC_MODE_ABSOLUTE_CURRENT		
9	Update Previous from Linear Fixed EF, no	Shall throw	
	more records recNumber = 0	sim.access.SIMViewException with	
	mode = REC_ACC_MODE_PREVIOUS	reason code RECORD_NUMBER_NOT_AVAIL	
	recOffset = 0	ABLE.	
	data[0:3] = '88'	7.6522.	
	<pre>dataOffset = respOffset = 0 dataLength = respLength = 4</pre>		
	updateRecord()		
10	Update Previous from Cyclic EF	1 - No exception shall be thrown.	
	1 - fid = FID_DF_SIMTEST	2 - No exception shall be thrown.	
	<pre>select() 2 - fid = FID_EF_CARU</pre>	3 - No exception shall be thrown.	
	z - 11d = F1D_EF_CARU select()	4 - No exception shall be thrown.	
	3 - recNumber = 2	5 - No exception shall be thrown.	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT	resp shall be: resp[0] = data[0]	
	recOffset = 0 respOffset = 0	resp[0] = data[0] resp[1] = data[1]	
	respLength = 3	resp[1] = data[1]	
	readRecord()	1,[-1[-1	
	4 - recNumber = 2		
	<pre>mode = REC_ACC_MODE_PREVIOUS data[0:2] = resp[0:2] ^ 'FF'</pre>		
	dataOffset = 0		
	dataLength = 3		
	<pre>updateRecord() 5 - recNumber = 0</pre>		
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT		
	respOffset = 0		
	respLength = 3		
11	readRecord() Update Absolute from Linear Fixed EF beyond	1. No exception shall be through	
11	Records	1 - No exception shall be thrown. 2 - Shall throw	
	Records 1 - fid = EFLARU	sim.access.SIMViewException with	
	select()	reason code	
	2 -recNumber = -1	RECORD_NUMBER_NOT_AVAIL	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT	ABLE.	
	recOffset = 0	3 - Shall throw	
	•		

ld	Description	API Expectation	APDU Expectation
	dataOffset = 0	sim.access.SIMViewException with	
	dataLength = 4	reason code	
		RECORD NUMBER NOT AVAIL	
	2 - recNumber = 3		
	updateRecord()	ABLE.	

ld	Description	API Expectation	APDU Expectation
12	No current record in linear fixed EF, update	1 - No exception shall be thrown.	•
	current	2 - Shall throw	
	1 - fid = EFLARU select() // No curr rec	sim.access.SIMViewException with	
	2 - recNumber = 0 // curr rec	reason code RECORD_NUMBER_NOT_AVAIL	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT	ABLE.	
	recOffset = 0 dataOffset = 0	AULL.	
	dataOffset = 0 dataLength = 4		
	updateRecord()		
13	recOffset < 0	1 - No exception shall be thrown.	
	1 - fid = EFLARU select()	2 - Shall throw	
	2 - recNumber = 1 // rec 1	sim.access.SIMViewException with	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT	reason code OUT_OF_RECORD_BOUNDARIE	
	recOffset = -1	S.	
	<pre>dataOffset = 0 dataLength = 4</pre>	0.	
	updateRecord()		
14	recOffset + dataLength > Record Length	1 - No exception shall be thrown.	
	1 - fid = EFLARU	2 - Shall throw	
	<pre>select() 2 - recNumber = 1</pre>	sim.access.SIMViewException with	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT	reason code	
	recOffset = 2	OUT_OF_RECORD_BOUNDARIE S.	
	<pre>dataOffset = 0 dataLength = 4</pre>	<u> </u>	
	updateRecord()		
15	Updating with invalid mode	1 - No exception shall be thrown.	
	1 - fid = EFLARU	2 - Shall throw	
	<pre>select() 2 - recNumber = 0</pre>	sim.access.SIMViewException with	
	mode = 1	reason code INVALID_MODE. 3 - Shall throw	
	recOffset = 0	sim.access.SIMViewException with	
	<pre>dataOffset = 0 dataLength = 4</pre>	reason code INVALID_MODE.	
	updateRecord()		
	3 - mode = 5		
16	updateRecord() Updating Cyclic EF with invalid mode	1 - No exception shall be thrown.	
10	1 - fid = DFSIMTEST	2 - No exception shall be thrown.	
	select()	3 - Shall throw	
	2 - fid = EFCARU select()	sim.access.SIMViewException with	
	3 - recNumber = 0	reason code INVALID_MODE.	
	mode = REC_ACC_MODE_NEXT	4 - Shall throw	
	recOffset = 0 data[0:2] = '00'	sim.access.SIMViewException with reason code INVALID_MODE.	
	dataOffset = 0	5 - Shall throw	
	dataLength = 3	sim.access.SIMViewException with	
	updateRecord() 4 - recNumber = 0	reason code INVALID_MODE.	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT		
	updateRecord()		
	5 - recNumber = 2		
	<pre>mode = REC_ACC_MODE_ABSOLUTE_CURRENT updateRecord()</pre>		
17	data is null	Shall throw	
	byte[] nullBuffer = null	java.lang.NullPointerException.	
	<pre>dataOffset = 0 dataLength = 10</pre>		
	updateRecord()		
18	dataOffset < 0	Shall throw	
	dataOffset = -1	java.lang.	
	<pre>dataLength = 10 updateRecord()</pre>	ArrayIndexOutOfBoundsException.	
19	dataLength < 0	Shall throw	
	dataOffset = 0	java.lang.	
	dataLength = -1	ArrayIndexOutOfBoundsException.	
20	updateRecord() dataOffset + dataLength > data.length	Shall throw	
20	dataOffset = 10	java.lang.	
	dataLength = 11	ArrayIndexOutOfBoundsException.	
-			

ld	Description	API Expectation	APDU Expectation
	updateRecord()		
22	EF is neither Cyclic nor Linear Fixed 1 - fid = DFSIMTEST select() 2 - fid = EFTNR select() 3 - dataOffset = 0 dataLength = 4 updateRecord() Access condition not fulfilled 1 - fid = EFCNU select() 2 - recOffset = 0 dataOffset = 0 dataOffset = 0 dataLength = 1 mode = REC_ACC_MODE_PREVIOUS updateRecord() 3 - fid = EFLNU select() 4 - recNumber = 1 mode = REC_ACC_MODE_ABSOLUTE_CURRENT recOffset = 0 dataOffset = 0 dataOffset = 0 dataLength = 1 updateRecord()	1 - No exception shall be thrown. 2 - No exception shall be thrown. 3 - Shall throw sim.access.SIMViewException with reason code FILE_INCONSISTENT. 1 - No exception shall be thrown. 2 - Shall throw sim.access.SIMViewException with reason code AC_NOT_FULFILLED. 3 - No exception shall be thrown. 4 - Shall throw sim.access.SIMViewException with reason code AC_NOT_FULFILLED.	
23	EF is invalidated	1 - No exception shall be thrown.	
	<pre>1 - fid = EFCNR invalidate() 2 - updateRecord() 3 - rehabilitate()</pre>	2 - Shall throw sim.access.SIMViewException with reason code INVALIDATION_STATUS_CONTR ADICTION. 3 - No exception shall be thrown.	

6.1.1.8.4 Test Coverage

CRR Number	Test Case Number	
N1	2, 3,4, 5, 7, 8, 10	
N2	2, 3	
N3	5, 6	
N4	7, 8, 9, 10	
P1	11	
P2	12	
P3	6	
P4	9	
P5	13	
P6	14	
P7	15	
P8	16	
P9	17	
P10	18	
P11	19	
P12	20	
C1	1	
C2	21	
C3	22	
C4	23	
C5, C6	Not Tested	

- 6.1.1.9 Method seek

Test Area Reference: API_1_SVW_SEEKB_BSS

6.1.1.9.1 Conformance Requirements

The method with the following header shall be compliant to its definition in the API. $public \ short \ seek(byte \ mode,$

byte[] patt,
 short pattOffset,
 short pattLength)
throws java.lang.NullPointerException,
 java.lang.ArrayIndexOutOfBoundsException,
 SIMViewException

Normal execution

- CRRN1: If the pattern in patt with the length pattLength at offset pattOffset is found in the record being specified by mode, the current record pointer is set to that record and the record number is returned. The record pointer of any other applet is not changed. This will be tested during the testing of the framework.
- CRRN2: If mode is SEEK_FROM_BEGINNING_FORWARD, the search starts with the first record forward towards the end of the file.
- CRRN3: If mode is SEEK_FROM_END_BACKWARD, the search starts with the last record backward towards the beginning of the file.
- CRRN4: If mode is SEEK_FROM_NEXT_FORWARD, the search starts from the next record after the current record pointer forward towards the end of file. If no current record pointer is selected, the search starts with the first record.
- CRRN5: If mode is SEEK_FROM_PREVIOUS_BACKWARD, the search starts from the previous record before the current record pointer backward towards the beginning of the file. If no current record pointer is selected the search starts with the last record.
- CRRN6: If pattern in patt is not found, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.PATTERN_NOT_FOUND.
- CRRN7: If mode is SEEK_FROM_NEXT_FORWARD and the record pointer is at the last record, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.PATTERN_NOT_FOUND.
- CRRN8: If mode is SEEK_FROM_PREVIOUS_BACKWARD and the record pointer is at the first record, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.PATTERN_NOT_FOUND.

Parameter errors

- CRRP1: If mode is not between 0 and 3 inclusive (0 = SEEK_FROM_BEGINNING_FORWARD, etc.), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INVALID_MODE.
- CRRP2: If the pattern array patt is null, an instance of NullPointerException shall be thrown.
- CRRP3: If pattOffset is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP4: If pattLength is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP5: If pattLength is greater than the size of the record of the currently selected EF, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.OUT_OF_RECORD_BOUNDARIES.
- CRRP6: If pattOffset plus pattLength is greater than the length of the pattern array patt.length, an instance of ArrayIndexOutOfBoundsException shall be thrown.

Context errors

CRRC1: If the calling applet has currently no EF selected, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.NO_EF_SELECTED.

- CRRC2: If the currently selected EF is not linear fixed, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.FILE_INCONSISTENT.
- CRRC3: If the calling applet does not fulfil the access condition, READ, to perform this function, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.AC_NOT_FULFILLED.
- CRRC4: If the currently selected EF is invalidated and the file status of the EF does not allow for reading an invalidated file, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INVALIDATION_STATUS_CONTRADICTION.
- CRRC5: If the method call causes a memory problem (e.g. memory access error), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.MEMORY_PROBLEM.
- CRRC6: If the method call causes an error to occur that is not expected and thus not handled, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INTERNAL_ERROR.

6.1.1.9.2 Test Suite Files

Additional requirements for the GSM personalisation: None

Test Script: API_1_SVW_SEEKB_BSS_1.scr

Test Applet: API_1_SVW_SEEKB_BSS_1.java

Load Script: API_1_SVW_SEEKB_BSS_1.ldr

Cleanup Script: API_1_SVW_SEEKB_BSS_1.ldr

Parameter File: API 1 SVW SEEKB BSS 1.par

6.1.1.9.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
0	SIM Initialisation	Responses ignored.	•
1	No EF selected Byte[] patt = new byte[20] pattOffset = 0 pattLength = 10 mode = SEEK_FROM_BEGINNING_FORWARD seek()	Shall throw sim.access.SIMViewException with reason code NO_EF_SELECTED.	
2	Pattern not Found 1 - fid = DFSIMTEST select() 2 - fid = EFLARU select() 3 - patt[0] = 'DA' pattOffset = 0 pattLength = 1 mode = SEEK_FROM_BEGINNING_FORWARD seek()	No exception shall be thrown. No exception shall be thrown. Shall throw sim.access.SIMViewException with reason code PATTERN_NOT_FOUND.	
3	Seek from Beginning Forward patt[0:2] = '55' pattOffset = 0 pattLength = 3 mode = SEEK_FROM_BEGINNING_FORWARD seek()	No exception shall be thrown. Shall return 1	
4	Seek from End Backward patt[0:2] = '55' pattOffset = 0 pattLength = 3 mode = SEEK_FROM_END_BACKWARD seek()	No exception shall be thrown. Shall return 1	
5	Seek from Next Forward patt[0:2] = 'AA' pattOffset = 0 pattLength = 3	No exception shall be thrown. Shall return 2	

ld	Description	API Expectation	APDU Expectation
	mode = SEEK_FROM_NEXT_FORWARD		•
6	Last Record, Seek from Next Forward	Shall throw	
	mode = SEEK_FROM_NEXT_FORWARD	sim.access.SIMViewException with	
	seek()	reason code PATTERN_NOT_FOUND.	
7	Seek from Previous Backward	No exception shall be thrown. Shall	
	<pre>patt[0:2] = '55' pattOffset = 0</pre>	return 1	
	pattLength = 3		
	<pre>mode = SEEK_FROM_PREVIOUS_BACKWARD seek()</pre>		
8	First Record, Seek from Previous Backward	Shall throw	
	SEEK_FROM_PREVIOUS_BACKWARD seek()	sim.access.SIMViewException with reason code	
		PATTERN_NOT_FOUND.	
9	Pattern not Found (out of reach)	Shall throw	
	<pre>patt[0:2] = '55' pattOffset = 0</pre>	sim.access.SIMViewException with reason code	
	pattLength = 3 mode = SEEK_FROM_NEXT_FORWARD	PATTERN_NOT_FOUND.	
	seek()		
10	Invalid mode 1 - mode = 4	1 - Shall throw sim.access.SIMViewException with	
	seek()	reason code INVALID_MODE	
	2 - mode = -1 seek()	2 - Shall throw	
		sim.access.SIMViewException with reason code INVALID_MODE	
11	patt is null	Shall throw	_
	<pre>byte[] nullBuffer = null mode = SEEK_FROM_BEGINNING_FORWARD</pre>	java.lang.NullPointerException.	
40	seek ()		
12	pattOffset < 0 patt[0:2] = '55'	Shall throw java.lang.	
	<pre>pattOffset = -1 pattLength = 3</pre>	ArrayIndexOutOfBoundsException	
	mode = SEEK_FROM_BEGINNING_FORWARD		
13	seek() pattLength < 0	Shall throw	
'	patt[0:2] = '55'	java.lang.	
	<pre>pattOffset = 0 pattLength = -1</pre>	ArrayIndexOutOfBoundsException	
	<pre>mode = SEEK_FROM_BEGINNING_FORWARD seek()</pre>		
14	pattLength > size of record	Shall throw	
	<pre>patt[0:4] = '55' pattOffset = 0</pre>	sim.access.SIMViewException with reason code	
	pattLength = 4	OUT_OF_RECORD_BOUNDARIE	
	<pre>mode = SEEK_FROM_BEGINNING_FORWARD seek()</pre>	S	
15	pattOffset + pattLength > patt.length	Shall throw	
	pattOffset = 1	java.lang. ArrayIndexOutOfBoundsException	
	<pre>pattLength = 3 mode = SEEK_FROM_BEGINNING_FORWARD</pre>		
16	seek() EF is not Linear Fixed	1. No exception shall be through	
10	1 - fid = EFTNU	1 - No exception shall be thrown.2 - Shall throw	
	<pre>select() 2 - pattOffset = 0</pre>	sim.access.SIMViewException with	
	pattLength = 3	reason code FILE_INCONSISTENT	
	<pre>mode = SEEK_FROM_BEGINNING_FORWARD seek()</pre>	3 - Shall throw	
	3 - fid = EFCNU	sim.access.SIMViewException with	
	<pre>select() seek()</pre>	reason code FILE_INCONSISTENT	
17	Access condition not fulfilled	1 - No exception shall be thrown.	
	<pre>1 - fid = EFLNR select()</pre>	2 - Shall throw sim.access.SIMViewException with	
	2 - patt[0] = '55' pattOffset = 0	reason code	
	paccorrage - 0	AC_NOT_FULFILLED.	_

ld	Description	API Expectation	APDU Expectation
	<pre>pattLength = 1 mode = SEEK_FROM_BEGINNING_FORWARD seek()</pre>		
18	EF is invalidated 1 - fid = EFLARU select() 2 - invalidate() 3 - patt[0] = '55 pattOffset = 0 pattLength = 1 mode = SEEK_FROM_BEGINNING_FORWARD seek() 4 - rehabilitate()	No exception shall be thrown. No exception shall be thrown. Shall throw sim.access.SIMViewException with reason code INVALIDATION_STATUS_CONTR ADICTION. No exception shall be thrown.	

6.1.1.9.4 Test Coverage

CRR Number	Test Case Number
N1	2, 3 - 6, 7
N2	3
N3	4
N4	5
N5	7
N6	2, 6, 8, 9
N7	6
N8	8
P1	10
P2	11
P3	12
P4	13
P5	14
P6	15
C1	1
C2	16
C3	17
C4	18
C5, C6	Not Tested

- 6.1.1.10 Method increase

Test Area Reference: API_1_SVW_INCR_BS_BS

6.1.1.10.1 Conformance Requirements

The method with the following header shall be compliant to its definition in the API.

Normal execution

CRRN1: The value in the array incr is added to the value of the last increased / updated record in the currently selected cyclic EF. The result is stored in the oldest record and returned in the array resp. The updated record becomes record number 1 and is selected as current record. The number of bytes of valid data in resp is returned.

Parameter errors

CRRP1: If the array incr is null, an instance of NullPointerException shall be thrown.

- CRRP2: If incrOffset is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP3: If incrOffset plus the value 3, is greater than the length of the array incr.length, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP4: If the result of the addition is greater than the maximum value of the record (represented by all bytes set to 'FF'), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.MAX_VALUE_REACHED.
- CRRP5: If the array resp is null, an instance of NullPointerException shall be thrown.
- CRRP6: If respOffset is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP7: If the remaining length of the array resp at the offset respOffset is less than the length of the record, an instance of ArrayIndexOutOfBoundsException shall be thrown.

Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.NO_EF_SELECTED.
- CRRC2: If the currently selected EF is not cyclic, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.FILE_INCONSISTENT.
- CRRC3: If increase is not allowed as indicated by the FCI byte 8 (GSM 11.11: FCI structure of an EF returned by the SELECT command), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.FILE_INCONSISTENT.
- CRRC4: If the calling applet does not fulfil the access condition, INCREASE, to perform this function, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.AC_NOT_FULFILLED.
- CRRC5: If the currently selected EF is invalidated, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INVALIDATION_STATUS_CONTRADICTION.
- CRRC6: If the method call causes a memory problem (e.g. memory access error), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.MEMORY_PROBLEM.
- CRRC7: If the method call causes an error to occur that is not expected and thus not handled, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INTERNAL_ERROR.

6.1.1.10.2 Test Suite Files

Additional requirements for the GSM personalisation: None

Test Script: API_1_SVW_INCR_BS_BS_1.scr

Test Applet: API_1_SVW_INCR_BS_BS_1.java

Load Script: API_1_SVW_INCR_BS_BS_1.ldr

Cleanup Script: API_1_SVW_INCR_BS_BS_1.clr

Parameter File: API 1 SVW INCR BS BS 1.par

6.1.1.10.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
0	SIM Initialisation	Responses ignored.	
1	No EF selected	Shall throw	
	byte[] incr = new byte[4]	sim.access.SIMViewException with	
	<pre>byte[] resp = new byte[4] incrOffset = 0</pre>	reason code NO_EF_SELECTED.	
	respOffset = 0		
	increase()		
2	Increase , verify response	1 - No exception shall be thrown.	
	1 - fid = DFSIMTEST	2 - No exception shall be thrown.	
	select() 2 - fid = EFCARU	3 - No exception shall be thrown.	
	select()	4 - No exception shall be thrown.	
	3 - //Set both records to 00 00 00	resp[] shall contain {0,0,1,0}.	
	mode = REC_ACC_MODE_PREVIOUS		
	<pre>data[0:3] = 0 dataOffset = 0</pre>		
	dataLength = 3		
	updateRecord()		
	updateRecord()		
	4 - incrOffset = 0 incr[2] = 1		
	respOffset = 0		
	increase()		
3	Increase, verify file	1 - No exception shall be thrown.	
	1 - incrOffset = 1	resp[] shall contain {0,0,0,3}.	
	<pre>incr[2] = 0, incr[3] = 2 respOffset = 1</pre>	2 - No exception shall be thrown.	
	increase()	resp[] shall contain {0,0,3,0}.	
	2 - resp[3] = 0		
	recNumber = 0		
	<pre>mode = REC_ACC_MODE_ABSOLUTE_CURRENT recOffset = 0</pre>		
	respOffset = 0		
	respLength = 0		
	readRecord()		
4	<pre>incr is null byte[] nullBuffer = null</pre>	Shall throw	
	incrOffset = 0	java.lang.NullPointerException.	
	respOffset = 0		
	increase()		
5	incrOffset < 0	Shall throw	
	<pre>incrOffset = -1 respOffset = 0</pre>	java.lang.	
	increase()	ArrayIndexOutOfBoundsException.	
6	incrOffset + 3 > incr.length	Shall throw	
	incrOffset = 2	java.lang.	
	<pre>respOffset = 0 increase()</pre>	ArrayIndexOutOfBoundsException.	
7	Reach Maximum Value	Shall throw	
	incr[0] = incr[1] = incr[2] = 'FF'	sim.access.SIMViewException with	
	incrOffset = 0	reason code	
	<pre>respOffset = 0 increase()</pre>	MAX_VALUE_REACHED.	
8	resp is null	Shall throw	
	incr[0] = incr[1] = 0x00'	java.lang.NullPointerException.	
	incr[2] = '02'		
	<pre>incr0ffset = 0 byte[] respNull = null</pre>		
	respOffset = 0		
	increase()		
9	respOffset < 0	Shall throw	
	incrOffset = 0	java.lang.	
	<pre>respOffset = -1 increase()</pre>	ArrayIndexOutOfBoundsException.	
10	respOffset + recordLength > resp.length	Shall throw	
. •	incrOffset = 0	java.lang.	
	respOffset = 2	ArrayIndexOutOfBoundsException.	
4.4	increase()		
11	EF is not Cyclic 1 - fid = EFTARU	1 - No exception shall be thrown.2 - Shall throw	
	select()	2 - Shall throw	
	1 * /		

ld	Description	API Expectation	APDU Expectation
	2 - incrOffset = 0	sim.access.SIMViewException with	
	respOffset = 0	reason code	
	<pre>increase() 3 - fid = EFLARU</pre>	FILE_INCONSISTENT.	
		3 - No exception shall be thrown.	
	4 - incrOffset = 0	4 - Shall throw	
	respOffset = 0	sim.access.SIMViewException with	
	increase()	reason code	
		FILE_INCONSISTENT.	
12	Access condition not fulfilled	1 - No exception shall be thrown.	
	1 - fid = EFCNIC	2 - Shall throw	
	select()	sim.access.SIMViewException with	
	<pre>2 - incrOffset = 0 respOffset = 0</pre>	reason code	
	increase()	AC_NOT_FULFILLED.	
13	EF is invalidated	1 - No exception shall be thrown.	
	1 - fid = EFCARU	2 - No exception shall be thrown.	
	select()	3 - Shall throw	
	2 - invalidate()	sim.access.SIMViewException with	
	3 - incrOffset = 0	reason code	
	<pre>respOffset = 0 increase()</pre>	INVALIDATION_STATUS_CONTR	
	4 - rehabilitate()	ADICTION.	
		4 - No exception shall be thrown.	
14	Check increase not allowed from FCI	1 - No exception shall be thrown.	
	1 - fciOffset = 0	Bit 7 of resp[7] shall not be set (0),	
	fciLength = 8	indicating that increase is not	
	select (FID_EF_CINA, fci)	allowed.	
	Verify FCI byte 8 (fci[7])	2 – Shall throw	
	2 - incrOffset = 0	sim.access.SIMViewException with	
	respOffset = 0	reason code	
	increase()	FILE_INCONSISTENT	
	Increase()		

6.1.1.10.4 Test Coverage

CRR Number	Test Case Number
N1	2, 3
P1	4
P2	5
P3	6
P4	7
P5	8
P6	9
P7	10
C1	1
C2	11
C3	14
C4	12
C5	13
C6, C7	Not Tested

6.1.1.11 Method invalidate

Test Area Reference: API_1_SVW_INVL

6.1.1.11.1 Conformance Requirements

The method with the following header shall be compliant to its definition in the API. $public\ void\ invalidate()$

throws SIMViewException

CRRN1: The currently selected EF of the calling applet shall be invalidated, i.e. the flag in the EF file status shall be changed accordingly.

Parameter errors

No requirements.

Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.NO_EF_SELECTED.
- CRRC2: If the calling applet does not fulfil the access condition, INVALIDATE, to perform this function, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.AC_NOT_FULFILLED.
- CRRC3: If the currently selected EF is already invalidated, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INVALIDATION_STATUS_CONTRADICTION.
- CRRC4: If the method call causes a memory problem (e.g. memory access error), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.MEMORY_PROBLEM.
- CRRC5: If the method call causes an error to occur that is not expected and thus not handled, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INTERNAL_ERROR.

6.1.1.11.2 Test Suite Files

Additional requirements for the GSM personalisation: None

Test Script: API_1_SVW_INVL_1.scr

Test Applet: API_1_SVW_INVL_1.java

Load Script: API_1_SVW_INVL_1.ldr

Cleanup Script: API_1_SVW_INVL_1.clr

Parameter File: API 1 SVW INVL 1.par

6.1.1.11.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
0	SIM Initialisation	Responses ignored.	
1	No EF is selected	1 - Shall throw	
	1 - invalidate()	sim.access.SIMViewException with	
		reason code NO_EF_SELECTED.	
2	Invalidate EF	1 - No exception shall be thrown.	
	1 - fid = DFSIMTEST	2 - No exception shall be thrown.	
	select()	3 - No exception shall be thrown.	
	2 - fid = EFTNR	4 - No exception shall be thrown.	
	select()	•	
	<pre>3 - invalidate() 4 - rehabilitate()</pre>		
3	Access condition not fulfilled	1 No execution shall be through	
3	1 - fid = EFCNIV	1 - No exception shall be thrown.	
	- lid = EFCNIV select()	2 - Shall throw	
	2 - invalidate()	sim.access.SIMViewException with	
	Z = Invalidate()	reason code	
		AC_NOT_FULFILLED.	
4	EF is already invalidated	 No exception shall be thrown. 	
	1 - fid = EFTNR	2 - No exception shall be thrown.	
	select()	3 - Shall throw	
	2 - invalidate()	sim.access.SIMViewException with	
	3 - invalidate()	reason code	
		INVALIDATION STATUS CONTR	
		ADICTION.	

6.1.1.11.4 Test Coverage

CRR number	Test Case Number
N1	2
C1	1
C2	3
C3	4
C4, C5	Not Tested

- 6.1.1.12 Method rehabilitate

Test Area Reference: API_1_SVW_REHA

6.1.1.12.1 Conformance Requirements

The method with the following header shall be compliant to its definition in the API.

public void rehabilitate()

throws SIMViewException

Normal execution

CRRN1: The currently selected EF of the calling applet shall be rehabilitated, i.e. the flag in the EF file status shall be changed accordingly.

Parameter errors

No requirements.

Context errors

CRRC1: If the calling applet has currently no EF selected, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.NO_EF_SELECTED.

CRRC2: If the calling applet does not fulfil the access condition, REHABILITATE, to perform this function, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.AC_NOT_FULFILLED.

CRRC3: If the currently selected EF is not invalidated, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INVALIDATION_STATUS_CONTRADICTION.

CRRC4: If the method call causes a memory problem (e.g. memory access error), an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.MEMORY_PROBLEM.

CRRC5: If the method call causes an error to occur that is not expected and thus not handled, an instance of SIMViewException shall be thrown. The reason code shall be SIMViewException.INTERNAL_ERROR.

6.1.1.12.2 Test Suite Files

Additional requirements for the GSM personalisation: None

Test Script: API_1_SVW_REHA_1.scr

Test Applet: API_1_SVW_REHA_1.java

Load Script: API_1_SVW_REHA_1.ldr

Cleanup Script: API_1_SVW_REHA_1.clr

Parameter File: API_1_SVW_REHA_1.par

6.1.1.12.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
0	SIM Initialisation	Responses ignored.	
1	No EF is selected	1 - Shall throw	
	1 - rehabilitate()	sim.access.SIMViewException with	
		reason code NO_EF_SELECTED.	
2	Rehabilitate invalidated File	1 - No exception shall be thrown.	
	1 - fid = DFSIMTEST	2 - No exception shall be thrown.	
	select()	3 - No exception shall be thrown.	
	2 - fid = EFCNR	4 - No exception shall be thrown.	
	<pre>select() 3 - invalidate()</pre>	5 - No exception shall be thrown.	
	4 - rehabilitate()	resp[] shall contain {0,0,1}.	
	5 - byte[] incr = new byte[3] = {0,0,1}		
	incrOffset = 0		
	<pre>byte[] resp = new byte[1] = 1</pre>		
	respOffset = 0		
	increase()		
3	Access condition not fulfilled	1 - No exception shall be thrown.	
	1 - fid = EFCNRH	2 - Shall throw	
	select()	sim.access.SIMViewException with	
	2 - rehabilitate()	reason code	
		AC_NOT_FULFILLED	
4	Rehabilitate validated File	1 - No exception shall be thrown.	
	1 - fid = EFCNR	2 - Shall throw	
	select()	sim.access.SIMViewException with	
	2 - rehabilitate()	reason code	
		INVALIDATION_STATUS_CONTR	
		ADICTION.	

6.1.1.12.4 Test Coverage

CRR number	Test Case Number
N1	2
C1	1
C2	3
C3	4
C4, C5	Not Tested

6.1.2 Class SIMSystem

6.1.2.1 Method getTheSIMView

Test Area Reference: API_1_SSY_GETS

6.1.2.1.1 Conformance Requirement:

The method with following header shall compliant to its definition in the API.

public static SIMView getTheSIMView()

Normal execution

CRRN1: returns a reference to class which implements the SIMView interface

Parameters error

No requirements

Context errors

No requirements

6.1.2.1.2 Test suite files

No additional requirements for the GSM personalisation:

Test Script: API_1_SSY_GETS_1.scr

Test Applet: API_1_SSY_GETS_1.java

Load Script: API_1_SSY_GETS_1.ldr

Cleanup Script: API_1_SSY_GETS_1.clr

Parameter File: API 1 SSY GETS 1.par

6.1.2.1.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
1	reference not equal null after execute	The returned reference shall be not null after execute	
2	reference to the GSM interface	Returned a reference to the GSM interface	

6.1.2.1.4 Test Coverage

CRR number	Test case number
N1	1,2

6.1.3 Class SIMViewException

- 6.1.3.1 Method throwlt

Test Area Reference: API_1_SVE_THITS

6.1.3.1.1 Conformance Requirement:

The method with following header shall be compliant to its definition in the API.

public static void throwIt(short reason)

CRRN1: Throws the JCRE instance of SIMViewException with the specified reason

CRRN2: Extends javacard.framework.CardRuntimeException

Parameter errors

No requirements

Context errors

No requirements

6.1.3.1.2 Test Suite Files

No additional requirements for the GSM personalisation

Test Script: API_1_SVE_THITS_1.scr

Test Applet: API_1_SVE_THITS_1.java

Load Script: API_1_SVE_THITS_1.ldr

Cleanup Script: API_1_SVE_THITS_1.clr

Parameter File: API 1 SVE THITS 1.par

6.1.3.1.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
1	Throws the JCRE instance of	Reason = 0	
	SIMViewException with the specified reason		
2	Throws the JCRE instance of	Reason = 1	
	SIMViewException with the specified reason		
3	Throws the JCRE instance of	Reason = 15	
	SIMViewException with the specified reason		
4	SIMViewException extends	Reason = 0	
	javacard.framework.CardRuntimeException		
5	SIMViewException extends	Reason = 1	
	javacard.framework.CardRuntimeException		
6	SIMViewException extends	Reason = 15	
	javacard.framework.CardRuntimeException		

6.1.3.1.4 Test Coverage

CRR number	Test case number
N1	1,2,3
N2	4,5,6

- 6.1.3.2 Constructor

Test Area Reference: API_1_SVE_COORS

6.1.3.2.1 Conformance Requirement:

The method with following header shall compliant to its definition in the API.

CRRN1: Construct a SIMViewException with the specified reason

Parameters error

No requirements

Context errors

No requirements

6.1.3.2.2 Test suite files

No additional requirements for the GSM personalisation

Test Script: API_1_SVE_COORS_1.scr

Test Applet: API_1_SVE_COORS_1.java

Load Script: API_1_SVE_COORS.ldr

Cleanup Script: API_1_SVE_COORS.clr

Parameter File: API_1_SVE_COORS.par

6.1.3.2.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
1	SIMViewException with the specified reason	Reason (specified)	
	(The reason shall set with setReason and		
	compare the Exception with getReason)		

6.1.3.2.4 Test Coverage

CRR number	Test case number
N1	1

6.1.3.3 Reason Codes

Test Area Reference: API_1_SVE_CONS

6.1.3.3.1 Conformance Requirement:

There is no API, only constants. This constants shall compliant to its definition in the API.

Normal execution

CRRN1: The Constants of the class SIMViewException shall all have the same name and value defined in the GSM03.19

CRRN2: Constructs SIMViewException a Exception with the specified reason

Parameters error

No requirements

Context errors

No requirements

6.1.3.3.2 Test suite files

None

6.1.3.3.3 Test Procedure

The constants in Java are resolved at compilation time, therefore a runtime test is not useful. No test of constants will be performed

6.2 Package sim.toolkit

6.2.1 Interface ToolkitConstants

- 6.2.1.1 Constants

Test Area Reference: API_2_TKC_CONS

6.2.1.1.1 Conformance Requirement:

There is no API, only constants. This constants shall be compare to its definition in the API.

Normal execution

CRRN1: The Toolkit Constants shall all have the same name and value defined in the GSM03.19 normalization.

Parameters error

No requirements

Context errors

No requirements

6.2.1.1.2 Test suite files

None

6.2.1.1.3 Test Procedure

The constants in Java are resolved at compilation time, therefore a runtime test is not useful. No test of constants will be performed.

6.2.2 Interface ToolkitInterface

6.2.2.1 Method processToolkit

Test Area Reference: API_1_TKI_PRTKBAPI_2_TKI_PRTKB

6.2.2.1.1 Conformance Requirement:

The method with following prototype shall <u>be</u> compliant to its definition in the API.

public void processToolkit(byte event)

throws ToolkitException

CRRN1: This interface must be implemented by a Toolkit applet (which extends the javacard.framework.Applet class) so that it can be triggered by the Toolkit Handler according to the registration information.

CRRN2: The Toolkit applet will have to implement the processToolkit shared method so that the following events can be notified:

Event	Description
EVENT_PROFILE_DOWNLOAD	Terminal Profile command reception
EVENT_FORMATTED_SMS_PP_ENV	03.48 formatted envelope SMS-PP Data
	Download reception
EVENT_FORMATTED_SMS_PP_UPD	03.48 formatted Update Record EF SMS
EVENT_FORMATTED_SMS_CB	formatted envelope Cell Broadcast Data
	<u>Download command reception</u>
EVENT_UNFORMATTED_SMS_PP_ENV	Unformatted Envelope SMS-PP Data Download
	reception
EVENT_UNFORMATTED_SMS_PP_UPD	Unformatted Update Record EF SMS
EVENT_UNFORMATTED_SMS_CB	Unformatted Cell Broadcast Data Download
	command reception
EVENT_MENU_SELECTION	Envelope Menu Selection command reception
EVENT_MENU_SELECTION_HELP_REQUEST	Envelope Menu Selection Help Request
	command reception
EVENT_CALL_CONTROL_BY_SIM	Envelope Call Control by SIM command
	reception
EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM	Envelope MO Short Message Control by SIM
	command reception
EVENT_TIMER_EXPIRATION	Envelope Timer Expiration
EVENT_EVENT_DOWNLOAD_MT_CALL	Envelope Event Download - MT call
EVENT_EVENT_DOWNLOAD_CALL_CONNECTED	Envelope Event Download - Call connected
EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED	Event Download - Call disconnected
EVENT_EVENT_DOWNLOAD_LOCATION_STATUS	Envelope Event Download - Location status
EVENT_EVENT_DOWNLOAD_USER_ACTIVITY	Envelope Event Download - User activity
EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE	Envelope Event Download - Idle screen available
EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS	Envelope Event Download - Card Reader Status
_EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION	
_EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION	
EVENT_STATUS_COMMAND	Status APDU command event
EVENT_UNRECOGNIZED_ENVELOPE	Unrecognized Envelope command reception

Parameters error

No requirements

Context errors

No requirements

6.2.2.1.2 Test suite files

The method is tested in the Framework

6.2.2.1.3 Test Coverage

CRR number	Test case number
N1	Tested in Framework
N2	Tested in Framework

6.2.3 Class EditHandler

It is not possible to test the methods provided by this class as it is declared 'abstract'; it will be done in the class inheriting it: EnvelopeResponseHandler, ProactiveHandler.

6.2.4 Class EnvelopeHandler

6.2.4.1 Method getEnvelopeTag

Test Area Reference: API_2_ENH_GENT

6.2.4.1.1 Conformance Requirement:

The method with following header shall be compliant to its definition in the API. public byte getEnvelopeTag()

Normal execution

CRRN1: The method shall return the Envelope BER-TLV tag.

CRRN2: The Envelope BER TAG is available for all triggered toolkit applets from the invocation to the termination of their processToolkit method if the EnvelopeHandler is available.

Parameters error

Context errors

6.2.4.1.2 Test suite files

Test Script: API_2_ENH_GENT_1.scr

Test Applet: API_2_ENH_GENT_1.java

Load Script: API_2_ENH_GENT_1.ldr

Cleanup Script: API_2_ENH_GENT_1.clr

Parameter File: API 2 ENH GENT 1.par

6.2.4.1.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
	getEnvelopeTag called just after triggering of the application.	Returns 0xD1	
	getEnvelopeTag called after a proactive command.	Returns 0xD1	
	getEnvelopeTag called after a second proactive command.	Returns 0xD1	

6.2.4.1.4 Test Coverage

CRR number	Test case number
N1	1, 2, 3
N2	1, 2, 3

- 6.2.4.2 Method getItemIdentifier

Test Area Reference: API 2 ENH GIID

6.2.4.2.1 Conformance Requirement:

The method with following header shall be compliant to its definition in the API.

public byte getItemIdentifier()

throws ToolkitException

Normal execution

CRRN1:The method shall return the item identifier byte value.

CRRN2:The item identifier byte value returned shall be from the first Item Identifier TLV element.

CRRN3: If the element is available it becomes the TLV selected.

CRRN4: The item identifier is available for all triggered toolkit applets from the invocation to the termination of their processToolkit method if the EnvelopeHandler is available.

Parameters error

No requirements.

Context errors

CRRC1: The method shall throw ToolkitException (UNAVAILABLE_ELEMENT) if the item identifier TLV is not present.

CRRC2: The method shall throw ToolkitException (OUT_OF_TLV_BOUNDARIES) if the item identifier byte is missing in the Item Identifier Simple TLV.

6.2.4.2.2 Test suite files

Test Script: API_2_ENH_GIID_1.scr

Test Applet: API_2_ENH_GIID_1.java

Load Script: API_2_ENH_GIID_1.ldr

Cleanup Script: API_2_ENH_GIID_1.clr

Parameter File: API 2 ENH GIID 1.par

6.2.4.2.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
1	Send envelope SMS-PP Formatted with item	Returns 03	
	identifier TLV and identifier value of 03		
2	Send envelope SMS-PP Formatted with two item	Returns FF	
	identifier TLV with first value FF and second 44		
3	Send envelope SMS-PP Formatted with two item	Returns 81	_
	identifier TLV with first value 81 and second 44,	Returns 81	
	call twice the method getItemIdentifier		
4	Send envelope SMS-PP Formatted with item	getItemIdentifier=getValueByte	
	identifier TLV and value of 66. FindTLV with TAG		
	02. getItemIdentifier and then getValueByte with		
	offset 0		
5	Send envelope SMS-PP Formatted without item	ToolkitException	
	identifier TLV and getItemIdentifier	(UNAVAILABLE_ELEMENT)	
6	Send Envelope SMS-PP Formatted with item	Returns 66	
	identifier TLV (66), send proactive command. Then		
	getItemIdentifier		
7	Send Envelope SMS-PP Formatted with item	ToolkitException	
	identifier TLV but without item number	(OUT_OF_TLV_BOUNDARIES)	

6.2.4.2.4 Test Coverage

CRR number	Test case number
N1	1, 2, 3
N2	2, 3
N3	4
N4	6
C1	5
C2	7

6.2.4.3 Method getSecuredDataLength

Test Area Reference: API_2_ENH_GSDL

6.2.4.3.1 Conformance Requirement:

The method with following header shall be compliant to its definition in the API.

public short getSecuredDataLength()

throws ToolkitException

Normal execution

CRRN1: The method shall return the length of the secured data contained in a SMS TPDU TLV.

CRRN2: The length is from the first SMS TPDU TLV.

CRRN3: The length should not include padding bytes.

CRRN4: The method can be used if the event is EVENT_FORMATTED_SMS_PP_ENV and if the SMS TP-UD is formatted according to GSM03.48[8].

CRRN5: The method can be used if the event is EVENT_FORMATTED_SMS_PP_UPD and if the SMS TP-UD is formatted according to GSM03.48[8].

CRRN6: The method can be used if the event is EVENT FORMATTED SMS CB and if the Cell Broadcast Page is formatted according to [8].

<u>CRRN7:</u> If the method is successful and if the event is <u>EVENT FORMATTED SMS PP ENV</u>, the selected TLV should be the SMS TPDU <u>TLV</u>.

<u>CRRN8</u>: If the method is successful and if the event is EVENT FORMATTED SMS CB, the selected TLV should be the Cell Broadcast Page TLV.

Parameters error

No requirements

Context errors

CRRC1: The method shall thrown ToolkitException (UNAVAILABLE_ELEMENT) in case of unavailable SMS TPDU TLV element.

CRRC2: The method shall thrown ToolkitException (UNAVAILABLE_ELEMENT) in case of missing Secured Data.

6.2.4.3.2 Test suite files

Specific triggering:

- FORMATTED SMS CB
- <u>UNFORMATTED</u> SMS CB

- FORMATTED SMS PP UPD

- UNFORMATED SMS PP ENV

- For Formatted triggering if CC/RC/DS is used, the security parameters are the one used for downloading applications.

Test Script: API_2_ENH_GSDL_1.scr

Test Applet: API_2_ENH_GSDL_1.java

Load Script: API_2_ENH_GSDL_1.ldr

Cleanup Script: API_2_ENH_GSLD_1.clr

Parameter File: API_2_ENH_GSLD_1.par

6.2.4.3.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Test with FORMATTED SMS_PP_ENV and TP-	Returns 0x2A	I I
-	OA length of 2		
2	Test with TP-OA length of 6	Returns 0x2A	
	Test with TP-OA length of 12	Returns 0x2A	
	Test with RC/CC/DS length of 0	Returns 0x10	
	Test with RC/CC/DS length of 8	Returns 0x10	
	Test with PCNTR = 0	Returns 0x10	
	Test with PCNTR = 7	Returns 0x05	
	Test with SecuredDataLength = 00	Returns 0x00	
	Test with UserDataLength = 0x33	Returns 0x33	
	Test with UserDataLength = 0x 6C	Returns 0x 6C	
	Test with UserDataLength = 0x 6D	Returns 0x 6D	
12	Test with UserDataLength = maximum length: 0x79	Returns 0x 79	
	Verify it is the first TPDU TLV: Send a SMS PP with 2 TPDU TLV and inside two different secured data lengths: 5 and 10	Returns 0x05	
14	Same test as 1 but with FORMATTED_SMS_PP_UPD	Returns 0x2A	
	Same test as 2 but with FORMATTED_SMS_PP_UPD	Returns 0x2A	
16	Same test as 3 but with FORMATTED_SMS_PP_UPD	Returns 0x2A	
17	Same test as 4 but with FORMATTED_SMS_PP_UPD	Returns 0x10	
18	Same test as 5 but with FORMATTED_SMS_PP_UPD	Returns 0x10	
19	Same test as 63 but with FORMATTED_SMS_PP_UPD	Returns 0x10	
20	Same test as 74 but with FORMATTED_SMS_PP_UPD	Returns 0x05	
	Same test as 85 but with FORMATTED_SMS_PP_UPD	Returns 0x00	
	Same test as 96 but with FORMATTED_SMS_PP_UPD	Returns 0x33	
23	Same test as 107 but with FORMATTED_SMS_PP_UPD	Returns 0x 6C	
24	Same test as 118 but with FORMATTED_SMS_PP_UPD	Returns 0x 6D	
25	Same test as 129 but with FORMATTED_SMS_PP_UPD	Returns 0x 79	
26	Same test as 1340 but with FORMATTED_SMS_PP_UPD	Returns 0x05	
	Same test as 4 but with FORMATTED_SMS_CB	Returns 0x10	
	Same test as 5 but with FORMATTED_SMS_CB	Returns 0x10	

<u>29</u>	Same test as 6 but with FORMATTED SMS CB	Returns 0x10
<u>30</u>	Same test as 7 but with FORMATTED SMS CB	Returns 0x05
<u>31</u>	Same test as 8 but with FORMATTED SMS CB	Returns 0x00
<u>32</u>	Same test as 9 but with FORMATTED SMS CB	Returns 0x33
<u>33</u>	Same test as 12 but with maximum length: 0x42,	Returns 0x 42
	and FORMATTED_SMS_CB	
<u>34</u> 2	Test with FORMATTED_SMS_PP_ENV	getValueByte returns 0x40
	Verify after call of the method the current TLV is	
	the TPDU TLV:	
	findTLV device identities, getSecuredDataLength	
	and then getValueByte to verify that the current	
	TLV is the TPDU TLV	
<u>35</u>	Test with FORMATTED_SMS_CB	getValueByte returns 0x58
	Verify after call of the method the current TLV is	
	the Cell Broadcast Page TLV:	
	findTLV device identities, getSecuredDataLength	
	and then getValueByte to verify that the current	
	TLV is the Cell Broadcast Page TLV	
	Send an envelope SMS CB,	ToolkitException
	getSecuredDataLength	UNAVAILABLE_ELEMENT
	Send an envelope SMS PP unformatted	ToolkitException
9		UNAVAILABLE_ELEMENT

6.2.4.3.4 Test Coverage

This method has only been tested with call control and the tests shall be improved during 03.48 tests.

CRR number	Test case number
N1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,
	11, 12, 13
N2	13
N3	6, 7
N4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,
	11, 12, 13, 25
N5	14, 15, 16, 17, 18, 19, 20,
	21, 22, 23, 24, 25, 26
N6	27
C1	28
C2	29
<u>N6</u>	<u>27, 28, 29, 30, 31, 32, 33</u>
<u>N7</u>	<u>34</u>
<u>N8</u>	<u>35</u>
<u>C1</u>	<u>36</u>
<u>C2</u>	<u>37</u>

- 6.2.4.4 Method getSecuredDataOffset

Test Area Reference: API_2_ENH_GSDO

6.2.4.4.1 Conformance Requirement:

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: The method shall return the offset of the secured data first byte contained in a SMS TPDU TLV.

CRRN2: The offset is from the first SMS TPDU TLV.

- CRRN3: The method can be used if the event is EVENT_FORMATTED_SMS_PP_ENV and if the SMS TP-UD is formatted according to GSM03.48[8].
- CRRN4: The method can be used if the event is EVENT_FORMATTED_SMS_PP_UPD and if the SMS TP-UD is formatted according to GSM03.48[8].
- CRRN5: The method can be used if the event is EVENT FORMATTED SMS CB and if the Cell Broadcast Page is formatted according to [8].
- <u>CRRN6</u>: If the method is successful <u>and if the event is EVENT_FORMATTED_SMS_PP_ENV</u>, the selected TLV should be the SMS TPDU TLV.
- <u>CRRN7</u>: If the method is successful and if the event is <u>EVENT_FORMATTED_SMS_CB</u>, the selected TLV should be the Cell Broadcast Page TLV.

Parameters error

No requirements

Context errors

- CRRC1: The method shall thrown ToolkitException (UNAVAILABLE_ELEMENT) in case of unavailable SMS TPDU TLV element.
- CRRC2: The method shall thrown ToolkitException (UNAVAILABLE_ELEMENT) in case of missing Secured Data.

6.2.4.4.2 Test suite files

Specific triggering:

SMS CB

FORMATTED SMS PP UPD

——- FORMATTED SMS CB

- UNFORMATTED SMS CB
- FORMATTED SMS PP UPD
- UNFORMATED SMS PP ENV

 $\underline{\hspace{1cm}}$ For Formatted triggering if CC/RC/DS is used, the security parameters are the one used for downloading applications.

Test Script: API_2_ENH_GSDO_1.scr

Test Applet: API_2_ENH_GSDO_1.java

Load Script: API_2_ENH_GSDO_1.ldr

Cleanup Script: API_2_ENH_GSDO_1.clr

Parameter File: API_2_ENH_GSDO_1.par

6.2.4.4.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
1	Test with TP-OA length of 2	Returns 0x21	
2	Test with TP-OA length of 6	Returns 0x23	
3	Test with TP-OA length of 12	Returns 0x26	
4	Test with RC/CC/DS length of 0	Returns 0x21	
5	Test with RC/CC/DS length of 8	Returns 0x29	
6	Send a SMS PP with 2 TPDU TLV and inside two	Returns 0x24 (the first offset)	
	different secured data offsets		
7	Same test as 1 but with	Returns 0x21	

	· · · · · · · · · · · · · · · · · · ·	
	FORMATTED_SMS_PP_UPD	
8	Same test as 2 but with	Returns 0x23
	FORMATTED_SMS_PP_UPD	
9	Same test as 3 but with	Returns 0x26
	FORMATTED_SMS_PP_UPD	
10	Same test as 4 but with	Returns 0x21
	FORMATTED_SMS_PP_UPD	
11	Same test as 5 but with	Returns 0x29
	FORMATTED_SMS_PP_UPD	
12	Same test as 6 but with	Returns 0x24 (the first offset)
	FORMATTED_SMS_PP_UPD	
13	Test with FORMATTED SMS PP ENV	Returns 0x40
	Verify after call of the method the current TLV is	
	the TPDU TLV:	
	findTLV device identities, getSecuredDataOffset	
	and then getValueByte to verify that the current	
	TLV is the TPDU TLV	
14	Send an envelope SMS CB,	ToolkitException
	getSecuredDataOffset	UNAVAILABLE_ELEMENT
	Same test as 4 but with FORMATTED SMS CB	Returns 0x16
<u>15</u>	Same test as 5 but with FORMATTED_SMS_CB	Returns 0x1E
<u>16</u>		Returns 0x58
	Verify after call of the method the current TLV is	
	the Cell Broadcast Page TLV:	
	findTLV device identities, getSecuredDataOffset	
	and then getValueByte to verify that the current	
	TLV is the Cell Broadcast Page TLV	
<u>17</u>	Send an UNFORMATTED SMS CB envelope.	<u>ToolkitException</u>
101	getSecuredDataOffset	UNAVAILABLE ELEMENT
	Send an envelope UNFORMATTED SMS PP	ToolkitException
	unformatted envelope	UNAVAILABLE_ELEMENT
	Send an FORMATTED SMS-PP envelope	Returns 0x21
6	envelope SMS-PP formatted with no secured data	
1	, getSecuredDataOffset	

6.2.4.4.4 Test Coverage

This method has only been tested with call control and the tests shall be improved during 03.48 tests.

CRR number	Test case number
N1	1, 2, 3, 4, 5, 6, 16
<u>N1</u>	<u>1, 2, 3, 4, 5, 6, 19</u>
N2	6, 12
N3	1, 2, 3, 4, 5, 6, 16
<u>N3</u>	1, 2, 3, 4, 5, 6, 19
N4	7, 8, 9, 10, 11
N5	13
C1	14
C2	15
<u>N5</u>	<u>14,15</u>
<u>N6</u>	<u>13</u>
<u>N7</u>	<u>16</u>
<u>C1</u>	<u>17</u>
C2	18

- 6.2.4.5 Method getTheHandler

Test Area Reference: API_2_ENH_GTHD

6.2.4.5.1 Conformance Requirements

The method with following header shall be compliant to its definition in the API. public static EnvelopeHandler getTheHandler()

CRRN1: The method shall return the single system instance of the EnvelopeHandler class.

CRRN2: The EnvelopeHandler is a Temporary JCRE Entry Point Object (see Javacard 2.1 Runtime Environment (JCRE) Specification [12])

Parameters error

No requirements

Context errors

CRRC1: The method shall thrown ToolkitException (HANDLER_NOT_AVAILABLE) if the handler is busy.

6.2.4.5.2 Test suite files

Test Script: API_2_ENH_GTHD_1.scr

Test Applet: API_2_ENH_GTHD_1.java

Load Script: API_2_ENH_GTHD_1.ldr

Cleanup Script: API_2_ENH_GTHD_1.clr

Parameter File: API 2 ENH GTHD 1.par

6.2.4.5.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
1	getTheHandler twice	The returned objects shall be the	
		same	
2	Verify that getTheHandler returns an EnvelopeHandler GetTheHandler	The reference returned shall be an EnvelopeHandler (checkcast)	
3	Verify the returned value is not null GetTheHandler	The reference returned shall not be null.	

6.2.4.5.4 Test Coverage

CRR number	Test case number
N1	1, 2, 3
N2	To be checked in
	Framework tests and
	insert here cross
	reference
C1	To be checked in
	Framework tests and
	insert here cross
	reference

- 6.2.4.6 Method getTPUDLOffset

Test Area Reference: API_2_ENH_GTPO

6.2.4.6.1 Conformance Requirement:

The method with following header shall be compliant to its definition in the API. public short getTPUDLOffset()

throws ToolkitException

Normal execution

CRRN1: The method shall return the TPUDL offset in a SMS TPDU TLV.

CRRN2: The offset is from the first SMS TPDU TLV.

CRRN3: The method can be used if the event is EVENT_FORMATTED_SMS_PP_ENV.

CRRN4: The method can be used if the event is EVENT_FORMATTED_SMS_PP_UPD.

CRRN5: The method can be used if the event is EVENT_UNFORMATTED_SMS_PP_ENV.

CRRN6: The method can be used if the event is EVENT_UNFORMATTED_SMS_PP_UPD.

CRRN7: If the method is successful, the selected TLV should be the SMS TPDU TLV.

Parameters error

No requirements

Context errors

CRRC1: The method shall thrown ToolkitException (UNAVAILABLE_ELEMENT) in case of unavailable SMS TPDU TLV element.

CRRC2: The method shall thrown ToolkitException (UNAVAILABLE_ELEMENT) if the TPUDL field does not exist.

6.2.4.6.2 Test suite files

Specific triggering:

FORMATTED SMS PP UPD UNFORMATTED SMS PP UPD UNFORMATTED SMS PP ENV SMS CB

Test Script: API_2_ENH_GTPO_1.scr

Test Applet: API_2_ENH_GTPO_1.java

Load Script: API_2_ENH_GTPO_1.ldr

Cleanup Script: API_2_ENH_GTPO_1.clr

Parameter File: API 2 ENH GTPO 1.par

6.2.4.6.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Test with TP-OA length of 2	Returns 0x0D	
2	Test with TP-OA length of 6	Returns 0x0F	
3	Test with TP-OA length of 12	Returns 0x12	
4	Send a SMS PP with 2 TPDU TLV and inside two different UDL offsets	Returns 0x10 (the first offset)	
5	Same test as 1 but with FORMATTED_SMS_PP_UPD	Returns 0x0D	
6	Same test as 2 but with FORMATTED_SMS_PP_UPD	Returns 0x0F	
7	Same test as 3 but with FORMATTED_SMS_PP_UPD	Returns 0x12	
8	Same test as 4 but with FORMATTED_SMS_PP_UPD	Returns 0x10 (the first offset)	

9	Same test as 1 but with	Returns 0x0D
10	UNFORMATTED_SMS_PP_UPD Same test as 2 but with	Returns 0x0F
	UNFORMATTED_SMS_PP_UPD	
11	Same test as 3 but with	Returns 0x12
12	UNFORMATTED_SMS_PP_UPD Same test as 4 but with UNFORMATTED_SMS_PP_UPD	Returns 0x12 (the first offset)
13	Same test as 1 but with UNFORMATTED_SMS_PP_ENV	Returns 0x0D
14	Same test as 2 but with UNFORMATTED_SMS_PP_ENV	Returns 0x0F
15	Same test as 3 but with UNFORMATTED_SMS_PP_ENV	Returns 0x12
16	Same test as 4 but with UNFORMATTED_SMS_PP_ENV	Returns 0x10 (the first offset)
17	Verify after call of the method the current TLV is the TPDU TLV:	Returns 0x40
	findTLV device identities, getTPUDLOffset and then getValueByte to verify that the current TLV is the	
	TPDU TLV	
18	Send an envelope SMS CB, getTPUDLOffset	ToolkitException UNAVAILABLE_ELEMENT

6.2.4.6.4 Test Coverage

CRR number	Test case number
N1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,
	11, 12, 13, 14, 15, 16, 17
N2	4
N3	1, 2, 3, 4, 17
N4	5, 6, 7, 8
N5	13, 14, 15, 16
N6	9, 10, 11, 12
N7	17
C1	18
C2	Don't no how to test

- 6.2.4.7 Method getLength

Test Area Reference: API_2_ENH_GLEN

6.2.4.7.1 Conformance Requirement

The method with following header shall be compliant to its definition in the API.

public short getLength()

throws ToolkitException

Normal execution

CRRN1: returns the length in bytes of the TLV list.

Parameter Error

No requirements

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException.HANDLER_NOT_AVAILABLE.

6.2.4.7.2 Test Suite files

Specific triggering: None

Test Script: API_2_ENH_GLEN_1.scr

Test Applet: API_2_ENH_GLEN_1.java

Load Script: API_2_ENH_GLEN_1.ldr

Cleanup Script: API_2_ENH_GLEN_1.clr

Parameter File: API 2 ENH GLEN 1.par

6.2.4.7.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
1	Send an envelope SMS PP with BER length of 0x31	Result of getLength() is 0x0031	
2	Send an envelope SMS PP with BER length of 0x7F	Result of getLength() is 0x007Fh	
3	Send an envelope SMS PP with BER length of 81 80	Result of getLength() is 0x0080h	
4	Send an envelope SMS PP with BER length of 81 FC	Result of getLength() is 0x00FCh	

6.2.4.7.4 Test Coverage

CRR number	Test case number	
N1	1, 2, 3, 4	
C1	Does not apply for	
	EnvelopeHandler	

- 6.2.4.8 Method copy

Test Area Reference: API_2_ENH_COPY_BSS

6.2.4.8.1 Conformance Requirement

The method with following header shall be compliant to its definition in the API.

throws java.lang.NullPointerException,

java.lang.ArrayIndexOutOfBoundsException,

ToolkitException

Normal execution

CRRN1: copies the simple TLV list contained in the handler to the destination byte array.

CRRN2: returns dstOffset + dstLength.

Parameter errors

CRRP1: if dstBuffer is null a NullPointerException is thrown.

CRRP2: if dstOffset or dstLength or both would cause access outside array bounds, or if dstLength is negative, an ArrayIndexOutOfBoundsException is thrown.

CRRP3: if dstLength is grater than the length of the simple TLV List, an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException. OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.4.8.2 Test Suite files

Specific triggering: None

Test Script: API_2_ENH_COPY_BSS_1.scr

Test Applet: API_2_ENH_COPY_BSS_1.java

Load Script: API_2_ENH_COPY_BSS_1.ldr

Cleanup Script: API_2_ENH_-COPY-_-BSS-_1.clr

Parameter File: API_2_ENH_COPY_BSS_1.par

6.2.4.8.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
1	NULL as parameter to dstBuffer	NullPointerException is thrown	Al DO Expectation
'	NOLL as parameter to dstburier	Null officerException is thown	
2	dstOffset ≥ dstBuffer.length	ArrayIndexOutOfBoundsException is	
_	dstBuffer.length = 5	thrown	
	dstOffset = 5	unown	
	dstLength = 1		
3	dstOffset < 0	ArrayIndexOutOfBoundsException is	
	dstBuffer.length = 5	thrown	
	dstOffset = -1		
	dstLength = 1		
4	dstLength > dstBuffer.length	ArrayIndexOutOfBoundsException is	
	dstBuffer.length = 5	thrown	
	dstOffset = 0		
5	dstLength = 6 DstOffset + dstLength > dstBuffer.length	ArrayIndexOutOfBoundsException is	
5	DstBuffer.length = 5	thrown	
	DstOffset = 3	thrown	
	DstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsException is	
	dstBuffer.length = 5	thrown	
	dstOffset = 0		
	dstLength = -1		
7	DstLength > length of the simple TLV list	ToolkitException.OUT_OF_TLV_BO	
	DstBuffer.length = 48	UNDARIES is thrown	
	DstOffset = 0		
_	DstLength = 48 Successful call, dstBuffer is the whole buffer	D	
8	DstBuffer.length = 47	Result of copy() is 0X0047	
	DstOffset = 0		
	DstLength = 47		
9	Compare the buffer	Result of arrayCompare() is 0	
10	Successful call, dstBuffer is part of a buffer	Result of copy() is 0X0032	
	DstBuffer.length = 50	7,0	
	dstOffset = 3		
	dstLength = 47		
11	Compare the whole buffer	Result of arrayCompare() is 0	
12	Successful call, dstBuffer is part of a buffer	Result of copy() is 0X0009	
	dstBuffer.length = 15		
	<pre>dstOffset = 3 dstLength = 6</pre>		
13	Compare the whole buffer	Result of arrayCompare() is 0	
14	Successful call, dstBuffer is part of a buffer	Result of copy() is 0X0104	
14	dstBuffer.length = 260	result of copy() is one for	
	dstOffset = 257		
	dstLength = 3		
15	Compare the whole buffer	Result of arrayCompare() is 0	
16	Successful call, copy with length =0	Result of copy() is 0x104	
	Jacobonai dan, dopy mini longin =0	Troodit of dopy() to ox for	

dstBuffer.length = 260	
dstOffset = 260	
dstLength = 0	

6.2.4.8.4 Test Coverage

CRR number	Test case number
N1	9, 11, 13, 15
N2	8, 10, 12, 14, 16
P1	1
P2	2, 3, 4, 5, 6
P3	7
C1 Does not apply fo	
	EnvelopeHandler

6.2.4.9 Method findTLV

Test Area Reference: API_2_ENH_FINDBB 6.2.4.9.1 Conformance Requirement

The method with following header shall be compliant to its definition in the API. public byte findTLV(byte tag, byte occurrence)

throws ToolkitException

Normal execution

Looks for the indicated occurrence of a TLV element from the beginning of the TLV list (handler buffer):

CRRN1: the method is successful if the required occurrence exists then the corresponding TLV becomes current.

CRRN2: if the method is successful then it returns TLV_FOUND_CR_SET when Comprehension Required flag is set.

CRRN3: if the method is successful then it returns TLV_FOUND_CR_NOT_SET when Comprehension Required flag is not set.

CRRN4: if the required occurrence of the TLV element does not exist, the current TLV is no longer defined and TLV_NOT_FOUND is returned.

CRRN5: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if an input parameter is not valid (e.g. occurrence = 0) an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException BAD_INPUT_PARAMETER.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.4.9.2 Test Suite files

Specific triggering: None

Test Script: API_2_ENH_ENH_FINDBB_1.scr
Test Applet: API_2_ENH_ENH_FINDBB_1.java
Load Script: API_2_ENH_ENH_FINDBB_1.ldr

Cleanup Script: API_2_ENH_FINDBB_1.clr

Parameter File: API 2 ENH FINDBB 1.par

6.2.4.9.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
	Trig the applet with SMS PP including one more		
	tag 02 and one TAG 04		
1	Invalid input parameter	ToolkitException.BAD_INPUT_P	
	Occurrence = 0	ARAMETER is thrown	
2	Search 1st TLV	Result is TLV_FOUND_CR_SET	
	Tag = 02h Occurrence = 1		
3	Call the getValueLength() method	Result is 0x02	
4	Search 2nd TLV	Result is TLV_FOUND_CR_SET	
7	Tag = 06h	INESUR IS TEV_I COND_CIN_CET	
	Occurrence = 1		
5	Call the getValueLength() method	Result is 0x05h	
6	Select a TLV (tag 02h)		
	Search a wrong tag	Result is TLV_NOT_FOUND	
	Tag = 03h		
	Occurrence = 1		
7	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
<u> </u>		_ELEMENT is thrown.	
8	Search a tag with wrong occurrence	Result is TLV_NOT_FOUND	
	Tag = 02h Occurrence = 3		
9	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
	odn the gettalactorigal() method	ELEMENT is thrown.	
10	Search the TLV	Result is	
	Tag = 02h	TLV_FOUND_CR_NOT_SET	
	Occurrence = 2		
11	Search the TLV	Result is	
	Tag = 04h	TLV_FOUND_CR_NOT_SET	
40	Occurrence = 1	Desult is TLV FOUND OD OFT	
12	Search tag 81h Tag = 86h	Result is TLV_FOUND_CR_SET	
	Occurrence = 1		
13	Search tag 84h	Result is	
	Tag = 84h	TLV_FOUND_CR_NOT_SET	
	Occurrence = 1		

6.2.4.9.4 Test Coverage

CRR number	Test case number	
N1	3, 5	
N2	2, 4	
N3	10, 11	
N4	6, 7,8, 9	
N5	12, 13	
P1	1	
C1 Does not apply for		
	EnvelopeHandler	

- 6.2.4.10 Method getValueLength

Test Area Reference: API_2_ENH_GVLE

6.2.4.10.1 Conformance Requirement

The method with following header shall be compliant to its definition in the API.

public short getValueLength()

throws ToolkitException

CRRN1: gets and returns the binary length of the value field for the last TLV element which has been found in the handler.

Parameter errors

No requirements

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.4.10.2 Test Suite files

Specific triggering: None

Test Script: API_2_ENH_GVLE_1.scr

Test Applet: API_2_ENH_GVLE_1.java

Load Script: API_2_ENH_GVLE_1.ldr

Cleanup Script: API_2_ENH_GVLE_1.clr

Parameter File: API_2_ENH_GVLE_1.par

6.2.4.10.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
	Fill the SMS PP with TLV: Tag 33, Length C8		
1	getValueLength()	ToolkitException.UNAVAILABLE _ELEMENT is thrown	
2	Search TLV 02h		
	getValueLength()	Result is 0X0002	
3	Search TLV 0Bh		
	getValueLength()	Result is 0X0024	
4	Search TLV 33h		
	getValueLength()	Result is 0X00C8	

6.2.4.10.4 Test Coverage

CRR number	r Test case number	
N1	2, 3, 4	
C1	Does not apply for	
	EnvelopeHandler	
C2	1	

- 6.2.4.11 Method getValueByte

Test Area Reference: API_2_ENH_GVBYS
6.2.4.11.1 Conformance Requirement

The method with following header shall be compliant to its definition in the API.

CRRN1: Gets a byte from the last TLV element which has been found in the handler and returns its value (1 byte).

Parameter errors

CRRP1: if valueOffset is out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.4.11.2 Test Suite files

Specific triggering: None

Test Script: API_2_ENH_GVBYS_.scr

Test Applet: API_2_ENH_GVBYS_1.java

Load Script: API_2_ENH_GVBYS_-l_dr

Cleanup Script: API_2_ENH_GVBYS_1.clr

Parameter File: API_2_ENH_GVBY_1.par

6.2.4.11.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
	Fill the SMS PP with TLV: Tag 33, Length C8	-	-
	Value 01 02		
1	getValueByte(0)	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown	
2	Search TLV 02h		
	getValueByte(2)	ToolkitException.OUT_OF_TLV_	
		BOUNDARIES is thrown	
3	Search TLV 02h		
	getValueByte(1)	Result is 0x81	
4	Search TLV 02h (Device Identities TLV)		
	getValueByte(0)	Result is 83h (Source)	
5	Search TLV 33h		
	getValueByte(7E)	Result is 0x7F	
6	Search TLV 33h		
	getValueByte(80)	Result is 0x81	
7	getValueByte(7F)	Result is 0x80	
8	Search TLV B3h		
	getValueByte(C7)	Result is 0xC8	

6.2.4.11.4 Test Coverage

CRR number	Test case number	
N1	3, 4, 5, 6, 7, 8	
P1	2	
C1	Does not apply for	
	EnvelopeHandler	
C2	1	

- 6.2.4.12 Method copyValue

Test Area Reference: API_2_ENH_CPYVS_BSS

6.2.4.12.1 Conformance Requirement

The method with following header shall be compliant with its definition in the API.

Normal execution

CRRN1: copies a part of the last TLV element which has been found, into a destination. buffer.

CRRN2: returns dstOffset + dstLength.

Parameter errors

CRRP1: if dstBuffer is null NullPointerException is thrown.

CRRP2: if dstOffset or dstLength or both would cause access outside array bounds, or if dstLength is negative ArrayIndexOutOfBoundsException is thrown.

CRRP3: if valueOffset, dstLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.4.12.3 Test Suite files

Specific triggering: None

Test Script: API_2_ENH_CPYVS_BSS_1.scr
Test Applet: API_2_ENH_CPYVS_BSS_1.java
Load Script: API_2_ENH_CPYVS_BSS_1.ldr
Cleanup Script: API_2_ENH_CPYVS_BSS_1.clr

Parameter File: API 2 ENH CPYVS BSS 1.par

6.2.4.12.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Search TLV 02h	74 i Expediation	Al Do Expediation
-	copyValue() with a null dstBuffer	NullPointerException is thrown	
2	Search TLV 0Bh	'	
	dstOffset ≥ dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 5		
3	dstLength = 1 dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
3	dstBuffer.length = 5	n is thrown	
	dstOffset = -1	II IS UIIOWII	
	dstLength = 1		
4	dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	<pre>dstOffset = 0 dstLength = 6</pre>		
5	dstOffset + dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
Ů	dstBuffer.length = 5	n is thrown	
	dstOffset = 3	1	
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	<pre>dstBuffer.length = 5 dstOffset = 0</pre>	n is thrown	
	dstDffset = 0 dstLength = -1		
7	Search TLV 06h		
	valueOffset ≥ TLV Length	ToolkitException.OUT_OF_TLV_	
	valueOffset = 6	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	<pre>dstOffset = 0 dstLength = 1</pre>		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
U	valueOffset = -1	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 1	Tablista continua OUT OF TIV	
9	dstLength > TLV length valueOffset = 0	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
	dstBuffer.length = 15	BOUNDARIES IS UIIOWII	
	dstOffset = 0		
	dstLength = 7		
10	valueOffset + dstLength > TLV length	ToolkitException.OUT_OF_TLV_	
	<pre>valueOffset = 2 dstBuffer.length = 15</pre>	BOUNDARIES is thrown	
	dstOffset = 0		
	dstLength = 5		
11	Search TLV 01h		
	copyValue()	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown on the	
40	Convolution V 001	copyValue() method	
12	Search TLV 06h	Deput of part // chie/) in 0:0000	
	Successful call valueOffset = 0	Result of copyValue() is 0x0006	
	dstBuffer.length = 6		
	dstOffset = 0		
	dstLength = 6		
13	Compare buffer	Result is 00h	
4.4	buffer = 81 11 22 33 44 F5	+	
14	initialise dstBuffer dstBuffer = 55 55 55		
	Successful call	Result of copyValue() is 0x0007	
	valueOffset = 1	1.153.1. 6. 5567 (3.100() 15 6.0007	
	dstBuffer.length = 20		
	dstOffset = 3		
4 -	dstLength = 4	Deput is 00h	
15	Compare buffer buffer =	Result is 00h	
	buffer = 55 55 55 11 22		
	33 44 55 55 55		
	55 55 55 55 55		

	55 55 55 55		
16	Successful call, copy with length =0	Result of copyValue() is 20	
	dstBuffer.length = 20	., ,	
	dstOffset = 20		
	dstLength = 0		

6.2.4.12.4 Test Coverage

CRR number	Test case number	
N1	13, 15	
N2	12, 14, 16	
P1	1	
P2	2, 3, 4, 5, 6	
P3	7, 8, 9, 10	
C1	Does not apply for	
	EnvelopeHandler	
C2	11	

6.2.4.13 Method compareValue

Test Area Reference: API_2_ENH_CPRVS_BSS

6.2.4.13.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

Compares the last found TLV element with a buffer:

CRRN1: returns 0 if identical.

CRRN2: returns -1 if the first miscomparing byte in simple TLV List is less than that in compareBuffer.

CRRN3: returns 1 if the first miscomparing byte in simple TLV List is greater than that in compareBuffer.

Parameter errors

CRRP1: if compareBuffer is null NullPointerException shall be thrown.

CRRP2: if compareOffset or compareLength or both would cause access outside array bounds, or if compareLength is negative ArrayIndexOutOfBoundsException shall be thrown.

CRRP3: if valueOffset, dstLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.4.13.3 Test Suite files

Specific triggering: None

Test Script: API_2_ENH_CPRVS_BSS_1.scr

Test Applet: API_2_ENH_CPRVS_BSS_1.java

Load Script: API_2_ENH_CPRVS_BSS_1.ldr

Cleanup Script: API_2_ENH_CPRVS_BSS_1.clr

Parameter File: API 2 ENH CPRVS BSS 1.par

6.2.4.13.3 Test procedure

	Description	API Expectation	APDU Expectation
1	Search TLV 02h		- 1
	compareValue() with a null compareBuffer	NullPointerException is thrown	
2	Search TLV 0Bh		
	compareOffset ≥ compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 5	n is thrown	
	compareOffset = 5	THIS UNIOWIT	
	compareLength = 1		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 5	n is thrown	
	compareOffset = -1		
	compareLength = 1		
4	compareLength >compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 5	n is thrown	
	compareOffset = 0		
	compareLength = 6	1 1 1 0 10/5	
5	compareOffset + compareLength	ArrayIndexOutOfBoundsExceptio	
	>compareBuffer.length	n is thrown	
	compareBuffer.length = 5		
	compareOffset = 3		
6	compareLength = 3	Array Inday Out Of Day and a Expansion	
О	<pre>compareLength < 0 compareBuffer.length = 5</pre>	ArrayIndexOutOfBoundsExceptio	
	compareOffset = 0	n is thrown	
	compareLength = -1		
7	Search TLV 06h		
	valueOffset ≥ TLV Length	ToolkitException.OUT_OF_TLV_	
	valueOffset = 6	BOUNDARIES is thrown	
	compareBuffer.length = 15	BOONDAKIES IS IIIIOWII	
	compareOffset = 0		
	compareLength = 1		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	valueOffset = -1	BOUNDARIES is thrown	
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 1		
9	compareLength > TLV length	ToolkitException.OUT_OF_TLV_	
	valueOffset = 0	BOUNDARIES is thrown	
	compareBuffer.length = 15		
	compareOffset = 0		
10	compareLength = 7 valueOffset + compareLength > TLV length	ToolkitException.OUT_OF_TLV_	
10	valueOffset = 2	BOUNDARIES is thrown	
	compareBuffer.length = 15	DOUNDAKIES IS INFOWN	
	compareOffset = 0		
	compareLength = 5		
11	Search TLV 01h	Result is TLV_NOT_FOUND	
••	compareValue()	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown	
10	Search TLV 06h		
1ツ・		+	
12	Initialise compareRuffer	I I	
12	Initialise compareBuffer compareBuffer =		

	Compare buffers	Result is 00h	
	valueOffset = 0		
	<pre>compareOffset = 0</pre>		
	compareLength = 6		
13	Initialise compareBuffer		
	compareBuffer =		
	7F 11 22 33 44 F5		
	Compare buffers with same parameters	Result is -1	
14	Initialise compareBuffer		
	compareBuffer =		
	83 11 22 33 44 F5		
	Compare buffers with same parameters	Result is -1	
15	Initialise compareBuffer		
	compareBuffer =		
	55 55 55 81 11 22 33 44 F5		
	55 55 55 55		
	Compare buffers	Result is 00h	
	<pre>valueOffset = 1</pre>		
	<pre>compareOffset = 4</pre>		
	compareLength = 5		
16	Initialise compareBuffer		
	compareBuffer =		
	55 55 55 81 10 22 33 44 F5		
	55 55 55 55		
	Compare buffers with same parameters	Result is +1	
17	Initialise compareBuffer		
	compareBuffer =		
	55 55 55 81 12 22 33 44 F5		
	55 55 55 55		
	Compare buffers with same parameters	Result is -1	
40		D 1(()) ()	
18	Successful call, compareValue with length =0	Result of compareValue() is 0	
	CompareBuffer.length = 15		
	CompareOffset = 15		
<u></u>	CompareLength = 0		

6.2.4.13.4 Test Coverage

CRR number	Test case number	
N1	12, 15	
N2	13, 16, 18	
N3	14, 17	
P1	1	
P2	2, 3, 4, 5, 6	
P3	7, 8, 9, 10	
C1	Does not apply for	
	EnvelopeHandler	
C2	11	

6.2.4.14 Method findAndCopyValue(byte tag, byte[] dstBuffer, short dstOffset)

Test Area Reference: API_2_ENH_FACYB_BS

6.2.4.14.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public short findAndCopyValue(byte tag,

byte[] dstBuffer,

short dstOffset)

throws java.lang.NullPointerException,

java.lang.ArrayIndexOutOfBoundsException,

ToolkitException

CRRN1: looks for the first occurrence of a TLV element from the beginning of a TLV list and copy its value into a destination buffer.

CRRN2: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN3: if the method is successful then the corresponding TLV becomes current and dstOffset + length of the copied value is returned.

CRRN4: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if dstBuffer is null NullPointerException shall be thrown.

CRRP2: if dstOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.4.14.3 Test Suite files

Specific triggering: None

Test Script: API_2_ENH_FACYB_BS_1.scr

Test Applet: API_2_ENH_FACYB_BS_1.java

Load Script: API_2_ENH_FACYB_BS_1.ldr

Cleanup Script: API_2_ENH_FACYB_BS_1.clr

Parameter File: API_2_ENH_FACYB_BS_1.par

6.2.4.14.3 Test procedure

ld	Description	API Expectation	APDU Expectation
	Fill the SMS PP with TLV: Tag 02 Value 22 44		
	Tag 33, Length C4 Value 01 02		
1	FindAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	dstOffset ≥ dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	tag = 06h	n is thrown	
	dstBuffer.length = 06		
	dstOffset = 06		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 06	n is thrown	
	dstOffset = -1		
4	length > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 05	n is thrown	
	dstOffset = 0		
5	DstOffset + length >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	DstBuffer.length = 06	n is thrown	
	DstOffset = 1		
6	Select a TLV (tag 02h)		
	findAndCopyValue()	ToolkitException.UNAVAILABLE	
	tag = 03h	_ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown.	
7	Successful call	Result of findAndCopyValue () is	
	Tag = 06h	0006	

	DstBuffer.length = 06 DstOffset = 0		
<u> </u>		D 11: 001	
8	Compare buffer	Result is 00h	
	buffer = 81 11 22 33 44 F5		
9	initialise dstBuffer		
	dstBuffer = 55 55 55		
	Successful call	Result of findAndCopyValue () is	
	dstBuffer.length = 12	0008	
	dstOffset = 2		
10	Compare buffer	Result is 00h	
	buffer =		
	55 55 81 11 22 33 44 F5 55 55 55 55		
11	Successful call	Result of findAndCopyValue () is	
	tag = 02h	0002	
	dstBuffer.length = 2	3332	
	dstOffset = 0		
12	Compare buffer	Result is 00h	
	buffer = 83 81		
13	Successful call (with tag 82h)	Result of findAndCopyValue () is	
	tag = 82h	0002	
	dstBuffer.length = 02	3332	
	dstOffset = 0		
14	Compare buffer	Result is 00h	
	buffer = 83 81		
15	Successful call (with tag B3h)	Result of findAndCopyValue () is	
	tag = B3h	00C4	
	dstBuffer.length = C4		
	dstOffset = 0		
16	Compare buffer	Result is 00h	
	buffer = 01 02 C4		

6.2.4.14.4 Test Coverage

CRR number	Test case number	
N1	8, 10, 12	
N2	6	
N3	7, 9, 11	
N4	13, 14, 15, 16	
P1	1	
P2	2, 3, 4, 5	
C1	Does not apply for	
	EnvelopeHandler	

 6.2.4.15 Method findAndCopyValue(byte tag, byte occurrence, short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength)

Test Area Reference: API_2_ENH_FACYBS_BSS

6.2.4.15.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: looks for the indicated occurrence of a TLV element from the beginning of a TLV list and copy its value into a destination buffer.

CRRN2: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN3: if the method is successful then the corresponding TLV becomes current and dstOffset + dstLength is returned.

CRRN4: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if dstBuffer is null NullPointerException shall be thrown.

CRRP2: if dstOffset or dstLength or both would cause access outside array bounds, or if dstLength is negative ArrayIndexOutOfBoundsException shall be thrown.

CRRP3: if valueOffset, dstLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.4.15.3 Test Suite files

Test Script: API_2_ENH_FACYBS_BSS_1.scr

Test Applet: API_2_ENH_FACYBS_BSS_1.java

Load Script: API_2_ENH_FACYBS_BSS_1.ldr

Cleanup Script: API_2_ENH_FACYBS_BSS_1.clr

Parameter File: API 2 ENH FACYBS BSS 1.par

6.2.4.15.3 Test procedure

ld	Description	API Expectation	APDU Expectation
	Fill the SMS PP with TLV: Tag 02 Value 22 44	_	
	Tag 33, Length C4 Value 01 02		
1	findAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	dstOffset ≥ dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	tag = 06h, occurrence = 1	n is thrown	
	<pre>valueOffset = 0</pre>		
	dstBuffer.length = 5		
	dstOffset = 5		
	dstLength = 1		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = -1		
	dstLength = 1		
4	dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 0		
	dstLength = 6		
5	dstOffset + dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 3		
_	dstLength = 3	1 1 1 2 12 12	
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 0		
7	dstLength = -1	Tablist vantion OUT OF TIV	
7	valueOffset ≥ Value Length	ToolkitException.OUT_OF_TLV_	

	tag = 06h, occurrence = 1	BOUNDARIES is thrown	
	valueOffset = 6		
	<pre>dstBuffer.length = 15 dstOffset = 0</pre>		
	dstLength = 1		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	valueOffset = -1	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	<pre>dstOffset = 0 dstLength = 1</pre>		
9	dstLength > Value length	ToolkitException.OUT_OF_TLV_	
	valueOffset = 0	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	<pre>dstOffset = 0 dstLength = 7</pre>		
10	valueOffset + dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
	valueOffset = 2	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	dstOffset = 0		
11	dstLength = 5 Select a TLV (tag 02h)		
<u> </u>	findAndCopyValue()	ToolkitException.UNAVAILABLE	
	tag = 06h	ELEMENT is thrown	
	occurrence = 2		
	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
1.5	0	_ELEMENT is thrown.	
12	Successful call tag = 06h, occurrence = 1	Result of findAndCopyValue() is	
	<pre>rag = 06n, occurrence = 1 valueOffset = 0</pre>	6	
	dstBuffer.length = 06		
	dstOffset = 0		
13	dstLength = 06 Compare buffer	Result is 00h	
13	buffer = 81 11 22 33 44 F5	Result is oon	
14	initialise dstBuffer		
	dstBuffer = 55 55 55		
	Successful call	Result of findAndCopyValue () is	
	<pre>tag = 06h, occurrence = 1 valueOffset = 2</pre>	0007	
	dstBuffer.length = 12		
	dstOffset = 3		
	dstLength = 04		
15	Compare buffer buffer =	Result is 00h	
	55 55 55 22 33 44 F5 55 55 55 55 55		
16	Successful call	Result of findAndCopyValue() is	
	tag = 02h, occurrence = 1	0002	
	<pre>valueOffset = 0 dstBuffer.length = 12</pre>		
	dstBuller.length = 12 dstOffset = 0		
	dstLength = 2		
17	Compare buffer	Result is 00h	
40	buffer = 83 81 55 55 Successful call	Popult of find And Const (alice () :-	
18	tag = 02h, occurrence = 2	Result of findAndCopyValue() is 0002	
	valueOffset = 0	0002	
	dstBuffer.length = 12		
	<pre>dstOffset = 0 dstLength = 2</pre>		
19	Compare buffer	Result is 00h	
L	buffer = 22 44 55 55		
20	Successful call (with tag 82h)	Result of findAndCopyValue () is	
	tag = 82h	0002	
	occurrence = 1 valueOffset = 0		
	dstBuffer.length = 12		
	dstOffset = 0		
C.	dstLength = 02	Describie 001	
21	Compare buffer buffer = 83 81 55 55	Result is 00h	
22	Successful call (with tag 82h)	Result of findAndCopyValue () is	
	tag = 82h	0002	
	occurrence = 2		

	valueOffset = 0		
	dstBuffer.length = 12		
	dstOffset = 0		
	dstLength = 02		
23	Compare buffer	Result is 00h	
	Buffer = 22 44 55 55		
24	Successful call, findAndCopyValue with	Result of findAndCopyValue () is	
	length =0	12	
	DstBuffer.length = 12		
	dstOffset = 12		
	dstLength = 0		

6.2.4.15.4 Test Coverage

CRR number	Test case number
N1	13, 15, 17, 19
N2	11
N3	12, 14, 16, 18, 24
N4	20, 21, 22, 23
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
C1	Does not apply for EnvelopeHandler

6.2.4.16 Method findAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset)

Test Area Reference: API_2_ENH_FACRB_BS

6.2.4.16.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public byte findAndCompareValue(byte tag,

byte[] compareBuffer,
short compareOffset)

throws java.lang.NullPointerException,

java.lang.ArrayIndexOutOfBoundsException,

ToolkitException

Normal execution

Looks for the first occurrence of a TLV element from beginning of a TLV list and compare its value with a buffer:

CRRN1: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN2: if the method is successful then the corresponding TLV becomes current.

CRRN3: if identical returns 0.

CRRN4: if the first miscomparing byte in simple TLV is less than that in compareBuffer returns -1.

CRRN5: if the first miscomparing byte in simple TLV is greater than that in compareBuffer returns

CRRN6: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if compareBuffer is null NullPointerException shall be thrown.

CRRP2: if compareOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.4.16.3 Test Suite files

Test Script: API_2_ENH_FACRB_BS_1.scr

Test Applet: API_2_ENH_FACRB_BS_1.java

Load Script: API_2_ENH_FACRB_BS_1.ldr

Cleanup Script: API_2_ENH_FACRB_BS_1.clr

Parameter File: API 2 ENH FACRB BS 1.par

6.2.4.16.3 Test procedure

ld	Description	API Expectation	APDU Expectation
	Fill the SMS PP with TLV: Tag 02 Value 22 44	711 Expositation	Al DO Expediation
	Tag 33, Length C4 Value 01 02		
1	findAndCompareValue() with a null dstBuffer	NullPointerException is thrown	
2	compareOffset ≥ compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
_	tag = 06h	n is thrown	
	compareBuffer.length = 12		
	compareOffset = 12		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 12	n is thrown	
4	compareOffset = -1	A many day day Out Of Day yanda Even anti-	
4	<pre>length > compareBuffer.length compareBuffer.length = 05</pre>	ArrayIndexOutOfBoundsExceptio	
	compareOffset = 0	n is thrown	
5	compareOffset + length >	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length	n is thrown	
	compareBuffer.length = 12	I i i i i i i i i i i i i i i i i i i i	
	compareOffset = 7		
6	Select a TLV (tag 02h)		
	findAndCompareValue()	ToolkitException.UNAVAILABLE	
	tag = 03h	_ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown.	
7	Initialise compareBuffer		
	compareBuffer = 81 11 22 33 44 F5		
	Compare buffers	Result is 00h	
	<pre>tag = 06h compareOffset = 0</pre>		
8	Verify current TLV	Result is 06	
0	getValueLength()	Result is 00	
9	Initialise compareBuffer		
	compareBuffer = 81 11 22 33 44 F4		
	Compare buffers with same parameters	Result is +1	
10	Initialise compareBuffer		
	compareBuffer = 81 11 22 33 44 F6		
	Compare buffers with same parameters	Result is -1	
11	Initialise compareBuffer		
	compareBuffer =		
	55 55 81 11 22 33 44 F5 55 55 55 55	Describie 00h	
	Compare buffers	Result is 00h	
12	compareOffset = 2 Initialise compareBuffer		
12	compareBuffer =		
	55 55 83 81 55 55 55 55 55 55 55		
	Compare buffers	Result is 00h	
l			

	compareOffset = 2	
13	Initialise compareBuffer	
	compareBuffer =	
	55 55 83 80 55 55 55 55 55 55 55	
	Compare buffers	Result is +1
	<pre>compareOffset = 2</pre>	
14	Initialise compareBuffer	
	<pre>compareBuffer =</pre>	
	55 55 83 82 55 55 55 55 55 55 55	
	Compare buffers	Result is –1
	<pre>compareOffset = 2</pre>	
15	Initialise compareBuffer	
	<pre>compareBuffer =</pre>	
	83 81 55 55 55 55 55 55 55 55	
	Successful call (with tag 02h)	Result is 00h
	tag = 02h	
	<pre>compareBuffer.length = 12</pre>	
	compareOffset = 0	
16	Initialise compareBuffer	
	CompareBuffer = 01 02 C4	
	Successful call (with tag B3h)	Result is 00h
	Tag = B3h	
	CompareBuffer.length = C4	
	CompareOffset = 0	

6.2.4.16.4 Test Coverage

CRR number	Test case number
N1	6
N2	8
N3	7, 11, 12
N4	9, 13
N5	10, 14
N6	15, 16
P1	1
P2	2, 3, 4, 5
C1	Does not apply for EnvelopeHandler
	Enveloperianulei

 6.2.4.17 Method findAndCompareValue(byte tag, byte occurrence, short valueOffset, byte[] compareBuffer, short compareOffset, short compareLength)

Test Area Reference: API_2_ENH_FACRBBS_BSS

6.2.4.17.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public byte findAndCompareValue(byte tag,

byte occurence,
short valueOffset,
byte[] compareBuffer,
short compareOffset,
short compareLength)

throws java.lang.NullPointerException,
 java.lang.ArrayIndexOutOfBoundsException,

ToolkitException

Normal execution

Looks for the indicated occurrence of a TLV element from the beginning of a TLV list and compare its value with a buffer:

CRRN1: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN2: if the method is successful then the corresponding TLV becomes current.

CRRN3: if identical 0 is returned.

CRRN4: if the first miscomparing byte in simple TLV is less than that in compareBuffer -1 is returned.

CRRN5: if the first miscomparing byte in simple TLV is greater than that in compareBuffer 1 is returned

CRRN6: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if compareBuffer is null NullPointerException shall be thrown.

CRRP2: if compareOffset or compareLength or both would cause access outside array bounds, or if compareLength is negative ArrayIndexOutOfBoundsException shall be thrown.

CRRP3: if valueOffset, compareLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

CRRP4: if an input parameter is not valid (e.g. occurence = 0) an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException BAD_INPUT_PARAMETER.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.4.17.3 Test Suite files

Test Script: API_2_ENH_FACRBBS_BSS_1.scr

Test Applet: API_2_ENH_FACRBBS_BSS_1.java

Load Script: API_2_ENH_FACRBBS_BSS_1.ldr

Cleanup Script: API_2_ENH_FACRBBS_BSS_1.clr

Parameter File: API 2 ENH FACRBBS BSS 1.par

6.2.4.17.3 Test procedure

ld	Description	API Expectation	APDU Expectation
	Fill the SMS PP with TLV: Tag 02 Value 22 44 Tag 33, Length C4 Value 01 02		
1	findAndCompareValue() with a null compareBuffer	NullPointerException is thrown	
2	<pre>compareOffset ≥ compareBuffer.length tag = 06h, occurrence = 1 valueOffset = 0 compareBuffer.length = 6 compareOffset = 6 compareLength = 1</pre>	ArrayIndexOutOfBoundsException is thrown	
3	<pre>compareOffset < 0 compareBuffer.length = 6 compareOffset = -1 compareLength = 1</pre>	ArrayIndexOutOfBoundsException is thrown	
4	<pre>compareLength >compareBuffer.length compareBuffer.length = 5 compareOffset = 0 compareLength = 6</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
5	<pre>compareOffset + compareLength</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	

		,	
	compareOffset = 3		
6	compareLength = 3	ArrayladayOutOfDayada Tygan ti-	
6	<pre>compareLength < 0 compareBuffer.length = 5</pre>	ArrayIndexOutOfBoundsExceptio	
	compareOffset = 0	n is thrown	
	compareLength = -1		
7	valueOffset ≥ Value Length	ToolkitException.OUT_OF_TLV_	
-	tag = 06h, occurrence = 1	BOUNDARIES is thrown	
	valueOffset = 6		
	compareBuffer.length = 15		
	compareOffset = 0		
_	compareLength = 1 valueOffset < 0	ToolkitEveentien OUT OF TIV	
8	valueOffset = -1	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
	compareBuffer.length = 15	BOUNDARIES IS INFOWN	
	compareOffset = 0		
	compareLength = 1		
9	compareLength > Value length	ToolkitException.OUT_OF_TLV_	
	<pre>valueOffset = 0</pre>	BOUNDARIES is thrown	
	compareBuffer.length = 15		
	<pre>compareOffset = 0 compareLength = 7</pre>		
10	valueOffset + compareLength > Value length	ToolkitException.OUT_OF_TLV_	
10	valueOffset = 2	BOUNDARIES is thrown	
	compareBuffer.length = 15	DOUBLE IS UNOWIT	
	compareOffset = 0		
	compareLength = 5		
11	Invalid parameter	ToolkitException.BAD_INPUT_P	
	occurrence = 0	ARAMETER is thrown	
12	Select a TLV (tag 02h)		
	findAndCompareValue()	ToolkitException.UNAVAILABLE	
	tag = 06h	_ELEMENT is thrown	
	occurrence = 2 Call the getValueLength() method	ToolkitException.UNAVAILABLE	
	Can the getvalueLength() method	_ELEMENT is thrown.	
13	Initialise compareBuffer	LLLIVILIA I 19 (IIIOWII.	
13	compareBuffer = 81 11 22 33 44 F5		
	findAndCompareValue()	Result is 00h	
	tag = 06h, occurrence = 1	1.000	
	<pre>valueOffset = 0</pre>		
	compareOffset = 0		
4.4	compareLength = 6 Verify current TLV	Deput is 0000	
14	getValueLength()	Result is 0006	
15	Initialise compareBuffer		
13	compareBuffer = 81 11 22 33 44 F4		
	Compare buffers with same parameters	Result is +1	
16	Initialise compareBuffer		_
L	compareBuffer = 81 11 22 33 44 F6		
	Compare buffers with same parameters	Result is -1	
17	Initialise compareBuffer		
	compareBuffer =		
	55 55 55 22 33 44 F5 55 55 55 55	Describis 001	
	Compare buffers	Result is 00h	
	<pre>valueOffset = 2 compareOffset = 3</pre>		
	compareLength = 4		
18	Initialise compareBuffer		
	compareBuffer =		
	55 55 55 22 33 45 F5 55 55 55 55		
	Compare buffers with same parameters	Result is -1	
19	Initialise compareBuffer		
	compareBuffer =		
	55 55 55 22 33 43 F5 55 55 55 55	Decultie 14	
20	Compare buffers with same parameters	Result is +1	
20	Initialise compareBuffer compareBuffer =		
	83 81 55 55 55 55 55 55 55 55 55		
	findAndCompareValue()	Result is 00h	
	tag = 02h, occurrence = 1	1.0031.10 0011	
	valueOffset = 0		
	valueOliset - 0		

	compareOffset = 0		
	compareLength = 2		
21	Initialise compareBuffer		
21	compareBuffer =		
	22 44 55 55 55 55 55 55 55 55 55		
		Result is 00h	
	findAndCompareValue()	Result is oun	
	tag = 02h, occurrence = 2		
	valueOffset = 0		
	<pre>compareOffset = 0 compareLength = 2</pre>		
22			
22	Initialise compareBuffer		
	compareBuffer = 22 45 55 55 55 55 55 55 55		
		Describie 4	
	findAndCompareValue()	Result is -1	
	<pre>tag = 02h, occurrence = 2 valueOffset = 0</pre>		
	compareOffset = 0		
	compareLength = 2		
23			
23	Initialise compareBuffer compareBuffer =		
	83 81 55 55 55 55 55 55 55 55 55		
		Decult is 00h	
	Successful call (with tag 02h)	Result is 00h	
	<pre>tag = 02h, occurrence = 1 valueOffset = 0</pre>		
	compareBuffer.length = 12		
	compareOffset = 0		
	compareLength = 2		
24	Initialise compareBuffer		
24	compareBuffer = 01 02 C4		
	Successful call (with tag B3h)	Result is 00h	
	tag = B3h, occurrence = 1	Result is out	
	valueOffset = 0		
	compareBuffer.length = 00C4		
	compareOffset = 0		
	compareLength = 00C4		
25	Successful call, findAndCompareValue with	Result of findAndCompareValue()	
20	length =0	is 00h	
	DstBuffer.length = C4	10 0011	
	DstOffset = C4		
	DstLength = 0		
	220202011 - 0	1	

6.2.4.17.4 Test Coverage

CRR number	Test case number
N1	12
N2	14
N3	13, 17, 20, 21, 25
N4	19, 15
N5	16, 18, 22
N6	23, 24
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
P4	11
C1	Does not apply for EnvelopeHandler

6.2.5 Class EnvelopeResponseHandler

- 6.2.5.1 Method getTheHandler

Test Area Reference: API_2_ERH_GTHD

6.2.5.1.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: The method shall return the single system instance of the EnvelopeResponseHandler class.

CRRN2: The EnvelopeResponseHandler is a Temporary JCRE Entry Point Object (see Javacard 2.1 Runtime Environment (JCRE) Specification [12])

Parameter errors

No requirements

Context errors

CRRC1: The method shall thrown ToolkitException (HANDLER_NOT_AVAILABLE) if the handler is busy.

CRRC2: After the first invocation of the ProactiveHandler.send method the EnvelopeResponseHandler is no more available

6.2.5.1.2 Test suite files

Test Script: API_2_ERH_GTHD_1.scr

Test Applet: API_2_ERH_GTHD_1.java

Load Script: API_2_ERH_GTHD_1.ldr

Cleanup Script: API_2_ERH_GTHD_1.clr

Parameter File: API 2 ERH GTHD 1.par

6.2.5.1.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	getTheHandler twice	The returned objects shall be the	
		same	
2	Verify that getTheHandler returns an	The reference returned shall be an	
	EnvelopeHandler	EnvelopeResponseHandler	
	getTheHandler	(checkcast)	
3	Verify the returned value is not null	The reference returned shall not be	
	getTheHandler	null.	
4	getTheHandler, then send a proactive	ToolkitException	
	command, and then, appendTLV	HANDLER_NOT_AVAILABLE is	
		thrown	

6.2.5.1.4 Test Coverage

CRR number	Test case number
N1	1, 2, 3
N2	To be checked in
	Framework tests and
	insert here cross
	reference
C1	To be checked in
	Framework tests and
	insert here cross
	reference
C2	4

6.2.5.2 Method post

Test Area Reference: API_2_ERH_POSTB

6.2.5.2.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: When the method is called, the toolkit applet can continue it's processing (e.g. prepare a proactive command).

CRRN2: The byte statusType is SW1 of the status.

CRRN3: If the send method is called after a post method, the posted data are the first sent to the ME.

CRRN4: The SIM Toolkit Framework shall take the optional Application Data posted by the triggered toolkit applet if present, secure and send the response packet the SIM Toolkit Framework will return the response APDU defined by the toolkit applet.

Parameter error

No requirements

Context errors

CRRC1: The method shall thrown ToolkitException (HANDLER_NOT_AVAILABLE) if the handler is busy.

6.2.5.2.2 Test suite files

Specific triggering: Call control

Test Script: API_2_ERH_POSTB_1.scr

Test Applet: API_2_ERH_POSTB_1.java

Load Script: API_2_ERH_POSTB_1.ldr

Cleanup Script: API_2_ERH_POSTB_1.clr

Parameter File: API 2 ERH POSTB 1.par

6.2.5.2.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	getTheHandler and then post		9000
	(the handler is empty)		
2	Fill the handler (appendTLV to have bytes		9FFD data are retrieved with GET
	in it)and then post data with status		RESPONSE command
	9F		
3	Verify that after a post the handler is no	ToolkitException	
	more available	HANDLER_NOT_AVAILABL	
	appendTLV, post and then appendTLV	E is thrown on the second	
		appendTLV	
4	construct the response (appendTLV with		9E12 and posted data retrieved by a
	0x10 data) and post it with status 9E and		GET RESPONSE with status 9113
	then send a display text		and display text retrieved by a FETCH
5	Verify that it is possible to send a proactive		91 13 and display text is retrieved by
	command after a post		a FETCH
	getTheHandler and post , then send a		
	display text		
6	Verify it is not possible to post after a	ToolkitException	
	proactive command	HANDLER_NOT_AVAILABL	
	getTheHandler, appendTLV, send a	E is thrown	
	display text, post.		_
7	Verify that the handler is no more available		9E12 and posted data retrieved by a
	after a post	HANDLER_NOT_AVAILABL	GET RESPONSE
	getTheHandler, appendTLV, post with	E is thrown	
	status 9E, post with status 9F		

6.2.5.2.4 Test Coverage

CRR number	Test case number
N1	3, 4, 7
N2	1, 2, 4, 7
N3	4, 5
N4	To be checked in Framework tests and
	insert here cross reference
C1	6

6.2.5.3 Method postAsBERTLV

Test Area Reference: API_2_ERH_POSTBB

6.2.5.3.1 Conformance Requirement

The method with following header shall be compliant to its definition in the API.

public void postAsBERTLV(byte statusType,

byte tag)
throws ToolkitException

Normal execution

CRRN1: When the method is called, the toolkit applet can continue it's processing (e.g. prepare a proactive command) the SIM Toolkit Framework will return the response APDU defined by the toolkit applet.

CRRN2: The byte statusType is SW1 of the status

CRRN3: If the send method is called after a postAsBERTLV method, the posted data are the first sent to the ME.

CRRN4: The byte tag is the BER Tag at the beginning of the simple TLV list.

Parameter errors

No requirements

Context errors

CRRC1: The method shall thrown ToolkitException (HANDLER_NOT_AVAILABLE) if the handler is busy.

6.2.5.3.2 Test suite files

Specific triggering: Call control

Test Script: API_2_ERH_POSTBB_1.scr

Test Applet: API_2_ERH_POSTBB_1.java

Load Script: API_2_ERH_POSTBB_1.ldr

Cleanup Script: API_2_ERH_POSTBB_1.clr

Parameter File: API 2 ERH POSTBB 1.par

6.2.5.3.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	getTheHandler and then postAsBERTLV		9F02 data are retrieved with
	(the handler is empty)		GET RESPONSE command
			the tag shall be 33 and the
			length is 00
2	Fill the handler and then postAsBERTLV		9FFF data are retrieved with
	the data with status 9F, and tag 33		GET RESPONSE command
	ITI V (A BERTI V) I (I	T 1125	the tag shall be 33
3	appendTLV, postAsBERTLV and then	ToolkitException	
	appendTLV	HANDLER_NOT_AVAILABLE is	
4	construct the response (appendTLV with	thrown on the second appendTLV	OF14 and pasted data
4	0x10 data) and postAsBERTLV it with		9E14 and posted data retrieved by a GET
	status 9E, tag 75 and then send a display		RESPONSE the tag shall be
	text		75 with status 9113 and
	toxt		display text retrieved by a
			FETCH
5	getTheHandler and postAsBERTLV, then		9E02 and posted data
	send a display text		retrieved by a GET
			RESPONSE the tag 33 (and
			the length 00) with status
			9113 and display text is
	W. W. W. St. Land Co.	T 1125	retrieved by a FETCH
6	Verify it is not possible to postAsBERTLV	ToolkitException	
	after a proactive command getTheHandler, appendTLV, send a	HANDLER_NOT_AVAILABLE is	
	display text, postAsBERTLV.	thrown on the postAsBERTLV	
7	Verify that the handler is no more available	ToolkitException	9E14 and posted data
	after a postAsBERTLV	HANDLER_NOT_AVAILABLE is	retrieved by a GET
	getTheHandler, appendTLV(with data	thrown on the second postAsBERTLV	RESPONSE the tag shall be
	length = $0x10$, postAsBERTLV with status	·	56 with status 9000
	9E, tag 56, postAsBERTLV with status		
	9F, tag 28		

6.2.5.3.4 Test Coverage

CRR number	Test case number
N1	3, 4, 7
N2	1, 2, 4, 7
N3	4, 5
N4	2, 4, 7
C1	6

- 6.2.5.4 Method getLength

Test Area Reference: API_2_ERH_GLEN

6.2.5.4.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public short getLength()

throws ToolkitException

Normal execution

CRRN1: returns the length in bytes of the TLV list.

Parameter errors

No requirements

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException.HANDLER_NOT_AVAILABLE.

6.2.5.4.3 Test Suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_GLEN_1.scr

Test Applet: API_2_ERH_GLEN_1.java

Load Script: API_2_ERH_GLEN_1.ldr

Cleanup Script: API_2_ERH_GLEN_1.clr

Parameter File: API 2 ERH GLEN 1.par

6.2.5.4.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Clear the handler	Result of getLength() is 0	
	getLength()		
2	appendTLV with length of 7	Result of getLength() is 9	
	getLength()		
3	Clear the handler and appendTLV with Length	Result of getLength() is 253	
	of 250		
	getLength()		
4	Build a 7Fh Envelope response handler	Result of getLength() is 81h	
	getLength()		
5	Build a 80h Envelope response handler	Result of getLength() is 83h	
	getLength()		

Note: Test case 3 is limited to 253 and not 256 because the current 03.19 [7] is not clear enough on this point. So this test allows the two possible implementations.

6.2.5.4.4 Test Coverage

CRR number	Test case number
N1	1, 2, 3, 4, 5
C1	Does not apply for
	Envelope response
	handler

6.2.5.5 Method copy

Test Area Reference: API_2_ERH_COPY_BSS

6.2.5.5.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: copies the simple TLV list contained in the handler to the destination byte array.

CRRN2: returns dstOffset + dstLength.

Parameter errors

CRRP1: if dstBuffer is null a NullPointerException is thrown.

CRRP2: if dstOffset or dstLength or both would cause access outside array bounds, or if dstLength is negative, an ArrayIndexOutOfBoundsException is thrown.

CRRP3: if dstLength is greater than the length of the simple TLV List, an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException. OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.5.5.3 Test Suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_COPY_BSS_1.scr
Test Applet: API_2_ERH_COPY_BSS_1.java
Load Script: API_2_ERH_COPY_BSS_1.ldr
Cleanup Script: API_2_ERH_COPY_BSS_1.clr
Parameter File: API_2_ERH_COPY_BSS_1.par

6.2.5.5.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	appendTLV with value length of 7	·	•
	NULL as parameter to dstBuffer	NullPointerException is thrown	
2			
	dstOffset ≥ dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 5		
	dstLength = 1		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = -1		
4	dstLength = 1 dstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
4	dstEuffer.length = 5	n is thrown	
	dstOffset = 0	II IS UIIOWII	
	dstLength = 6		
5	dstOffset + dstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 3		
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 0		
7	dstLength = -1 dstLength > length of the simple TLV list	ToolkitException.OUT_OF_TLV_	
'	dstBuffer.length = 10	BOUNDARIES is thrown	
	dstOffset = 0	BOONDAKIES IS UIIOWII	
	dstLength = 10		
8	Successful call, dstBuffer is the whole buffer	Result of copy() is 9	
	dstBuffer.length = 9		
	dstOffset = 0		
_	dstLength = 9		
9	Compare the buffer	Result of arrayCompare() is 0	
10	Successful call, dstBuffer is part of a buffer	Result of copy() is 12	
	dstBuffer.length = 15 dstOffset = 3		
	dstLength = 9		
11	Compare the whole buffer	Result of arrayCompare() is 0	
12	Successful call, dstBuffer is part of a buffer	Result of copy() is 9	
-	dstBuffer.length = 15		
	dstOffset = 3		
	dstLength = 6		
13	Compare the whole buffer	Result of arrayCompare() is 0	-
14	Successful call, copy with length =0	Result of copy() is 15	
	dstBuffer.length = 15		
	dstOffset = 15		
	dstLength = 0		

6.2.5.5.4 Test Coverage

CRR number	Test case number
N1	9, 11, 13
N2	8, 10, 12, 14
P1	1
P2	2, 3, 4, 5, 6
P3	7
C1	Does not apply for
	Envelope response
	handler

- 6.2.5.6 Method findTLV

Test Area Reference: API_2_ERH_FINDBB

6.2.5.6.1 Conformance requirement

The method with following header shall be compliant to its definition in the API. public byte findTLV(byte tag, byte occurrence)

throws ToolkitException

Normal execution

Looks for the indicated occurrence of a TLV element from the beginning of the TLV list (handler buffer):

CRRN1: the method is successful if the required occurrence exists then the corresponding TLV becomes current.

CRRN2: if the method is successful then it returns TLV_FOUND_CR_SET when Comprehension Required flag is set.

CRRN3: if the method is successful then it returns TLV_FOUND_CR_NOT_SET when Comprehension Required flag is not set.

CRRN4: if the required occurrence of the TLV element does not exist, the current TLV is no longer defined and TLV_NOT_FOUND is returned.

CRRN5: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if an input parameter is not valid (e.g. occurrence = 0) an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException BAD_INPUT_PARAMETER.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.5.6.3 Test Suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_FINDBB_1.scr

Test Applet: API_2_ERH_FINDBB_1.java

Load Script: API_2_ERH_FINDBB_1.ldr

Cleanup Script: API_2_ERH_FINDBB_1.clr

Parameter File: API 2 ERH FINDBB 1.par

6.2.5.6.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	append the handler with TLVs:		
	81 03 11 22 33		
	82 02 99 77		
	Invalid input parameter	ToolkitException.BAD_INPUT_P	
	Occurrence = 0	ARAMETER is thrown	
2			
	Search 1st TLV	Result is TLV_FOUND_CR_SET	
	Tag = 01h		
	Occurrence = 1		
3	Call the getValueLength() method	Result is 03h	
4	Search 2nd TLV	Result is TLV_FOUND_CR_SET	
	Tag = 02h		

	Occurrence = 1		
5	Call the getValueLength() method	Result is 02h	
6	Select a TLV (tag 02h)		
	Search a wrong tag	Result is TLV_NOT_FOUND	
	Tag = 03h		
	Occurrence = 1		
7	Call the getValueLength() method	ToolkitException.UNAVAILABLE _ELEMENT is thrown.	
8	Search a tag with wrong occurrence	Result is TLV_NOT_FOUND	
	Tag = 01h		
	Occurrence = 2		
9	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown.	
10	Append a TLV with tag=02h		
	Search the TLV	Result is	
	Tag = 02h	TLV_FOUND_CR_NOT_SET	
	Occurrence = 2		
11	Append a TLV with tag=04h		
	Search the TLV	Result is	
	Tag = 04h	TLV_FOUND_CR_NOT_SET	
	Occurrence = 1		
12	Search tag 81h	Result is TLV_FOUND_CR_SET	
	Tag = 81h		
	Occurrence = 1		
13	Search tag 84h	Result is	
	Tag = 84h	TLV_FOUND_CR_NOT_SET	
	Occurrence = 1		

6.2.5.6.4 Test Coverage

CRR number	Test case number
N1	3, 5
N2	2, 4
N3	10, 11
N4	6, 7,8, 9
N5	12, 13
P1	1
C1	Does not apply for
	Envelope response
	handler

- 6.2.5.7 Method getValueLength

Test Area Reference: API_2_ERH_GVLE

6.2.5.7.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public short getValueLength()

throws ToolkitException

Normal execution

CRRN1: gets and returns the binary length of the value field for the last TLV element which has been found in the handler.

Parameter errors

No requirements

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.5.7.3 Test Suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_GVLE_1.scr

Test Applet: API_2_ERH_GVLE_1.java

Load Script: API_2_ERH_GVLE_1.ldr

Cleanup Script: API_2_ERH_GVLE_1.clr

Parameter File: API_2_ERH_GVLE_1.par

6.2.5.7.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	appendTLV 02 02 02 02		
	findTLV with TAG 03		
	getValueLength()	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown	
2	appendTLV with TAG 0D and length 00		
	Search TLV 0Dh		
	getValueLength()	Result is 00h	
3	Clear the handler and append TLV with TAG 0D and length 02		
	Search TLV 0Dh		
	getValueLength()	Result is 02h	
4	Clear the handler and append TLV with TAG 0D and length 0x7F		
	Search TLV 0Dh		
	getValueLength()	Result is 7Fh	
5	Clear the handler and append TLV with TAG 0D and length 0x80		
	Search TLV 0Dh		
	getValueLength()	Result is 80h	
6	Clear the handler and append TLV with TAG 0D and length 0xF1		
	Search TLV 0Dh		
	getValueLength()	Result is F1h	

6.2.5.7.4 Test Coverage

CRR number	Test case number
N1	2, 3, 4, 5, 6
C1	Does not apply for EnvelopeResponseHandl
	er
C2	1

- 6.2.5.8 Method getValueByte

Test Area Reference: API_2_ERH_GVBYS 6.2.5.8.1 Conformance requirement

The method with following header shall be compliant to its definition in the API. public byte getValueByte(short valueOffset)

throws ToolkitException

Normal execution

CRRN1: Gets a byte from the last TLV element which has been found in the handler and returns its value (1 byte).

Parameter errors

CRRP1: if valueOffset is out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.5.8.3 Test Suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_GVBYS_1.scr

Test Applet: API_2_ERH_GVBYS_1.java

Load Script: API_2_ERH_GVBYS_1.ldr

Cleanup Script: API_2_ERH_GVBYS_1.clr

Parameter File: API_2_ERH_GVBYS_1.par

6.2.5.8.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	appendTLV 82 02 81 82, appendTLV 81 03 11	-	-
	22 FE		
	findTLV with TAG 03		
	<pre>getValueByte(0)</pre>	ToolkitException.UNAVAILABLE _ELEMENT is thrown	
2	Search TLV 01h		
	getValueByte(3)	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
3	Search TLV 01h		
	getValueByte(2)	Result is FEh	
4	Search TLV 02h		
	getValueByte(0)	Result is 81h	
5	appendTLV with TAG 0D, Length 0x7E, Value: 00, 01,, 7D		
	getValueByte(7D)	Result is 7Dh	
6	clear the handler, appendTLV with TAG 0D, Length 0x80, Value: 00, 01,, 7F		
	getValueByte(7E)	Result is 7Eh	
7	getValueByte(7F)	Result is 7Fh	
8	clear the handler, appendTLV with TAG 0D, Length 0xF1, Value: 00, 01,, F0		
	getValueByte(F0)	Result is F0h	

6.2.5.8.4 Test Coverage

CRR number	Test case number
N1	3, 4, 5, 6, 7, 8
P1	2
C1	Does not apply for EnvelopeResponseHandler
C2	1

- 6.2.5.9 Method copyValue

Test Area Reference: API_2_ERH_CPYVS_BSS

6.2.5.9.1 Conformance requirement

The method with following header shall be compliant with its definition in the API.

Normal execution

CRRN1: copies a part of the last TLV element which has been found, into a destination. buffer.

CRRN2: returns dstOffset + dstLength.

Parameter errors

CRRP1: if dstBuffer is null NullPointerException is thrown.

CRRP2: if dstOffset or dstLength or both would cause access outside array bounds, or if dstLength is negative ArrayIndexOutOfBoundsException is thrown.

CRRP3: if valueOffset, dstLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

Parameter File:

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

API 2 ERH CPYVS BSS 1.par

6.2.5.9.3 Test Suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_CPYVS_BSS_1.scr
Test Applet: API_2_ERH_CPYVS_BSS_1.java
Load Script: API_2_ERH_CPYVS_BSS_1.ldr
Cleanup Script: API_2_ERH_CPYVS_BSS_1.clr

6.2.5.9.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	appendTLV with TAG: 0D and length 16 Select Text String TLV		
	copyValue() with a null dstBuffer	NullPointerException is thrown	
2			
	dstOffset ≥ dstBuffer.length dstBuffer.length = 5 dstOffset = 5 dstLength = 1	ArrayIndexOutOfBoundsExceptio n is thrown	
3	<pre>dstOffset < 0 dstBuffer.length = 5 dstOffset = -1 dstLength = 1</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
4	<pre>dstLength >dstBuffer.length dstBuffer.length = 5 dstOffset = 0 dstLength = 6</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
5	<pre>dstOffset + dstLength >dstBuffer.length dstBuffer.length = 5 dstOffset = 3 dstLength = 3</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
6	<pre>dstLength < 0 dstBuffer.length = 5 dstOffset = 0 dstLength = -1</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
7	clear the handler, appendTLV with TAG: 0D and length 6 Select Text String TLV		
	<pre>valueOffset ≥ Text String Length valueOffset = 6 dstBuffer.length = 15 dstOffset = 0 dstLength = 1</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
8	<pre>valueOffset < 0 valueOffset = -1 dstBuffer.length = 15 dstOffset = 0 dstLength = 1</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
9	<pre>dstLength > Text String length valueOffset = 0 dstBuffer.length = 15 dstOffset = 0 dstLength = 7</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
10	<pre>valueOffset + dstLength > Text String length valueOffset = 2 dstBuffer.length = 15 dstOffset = 0 dstLength = 5</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
11	Initialise the handler		
	copyValue()	ToolkitException.UNAVAILABLE _ELEMENT is thrown	
12	clear the handler, appendTLV with TAG: 0D and value: 04 00 01 0F Select Text String TLV		
	Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17	Result of copyValue() is 17	
13	Compare buffer buffer = 04 00 01 0F	Result is 00h	
14	<pre>initialise dstBuffer dstBuffer = 55 55 55</pre>		
	Successful call valueOffset = 2 dstBuffer.length = 20 dstOffset = 3	Result of copyValue() is 15	

	dstLength = 12		
15	Compare buffer	Result is 00h	
	buffer =		
	55 55 55 01 02		
	03 04 05 06 07		
	08 09 0A 0B 0C		
	55 55 55 55		
16	Successful call, copyValue with length =0	Result of copyValue() is 20	<u>-</u>
	dstBuffer.length = 20	·	
	dstOffset = 20		
	dstLength = 0		

6.2.5.9.4 Test Coverage

CRR number	Test case number
N1	13, 15
N2	12, 14, 16
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
C1	Does not apply for
	EnvelopeResponseHandl
	er
C2	11

- 6.2.5.10 Method compareValue

Test Area Reference: API_2_ERH_CPRVS_BSS

6.2.5.10.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

Compares the last found TLV element with a buffer:

CRRN1: returns 0 if identical.

CRRN2: returns -1 if the first miscomparing byte in simple TLV List is less than that in compareBuffer.

CRRN3: returns 1 if the first miscomparing byte in simple TLV List is greater than that in compareBuffer.

Parameter errors

CRRP1: if compareBuffer is null NullPointerException shall be thrown.

CRRP2: if compareOffset or compareLength or both would cause access outside array bounds, or if compareLength is negative ArrayIndexOutOfBoundsException shall be thrown.

CRRP3: if valueOffset, dstLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.5.10.3 Test Suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_CPRVS_BSS_1.scr

Test Applet: API_2_ERH_CPRVS_BSS_1.java

Load Script: API_2_ERH_CPRVS_BSS_1.ldr

Cleanup Script: API_2_ERH_CPRVS_BSS_1.clr

Parameter File: API 2 ERH CPRVS BSS 1.par

6.2.5.10.3 Test procedure

2 compare comp	endTLV with TAG: 0D and length 16 Select Text String TLV pareValue() with a null compareBuffer enpareOffset ≥ compareBuffer.length eBuffer.length = 5 elength = 1 compareOffset < 0 eBuffer.length = 5 elength = 1 elength = 1 pareLength > compareBuffer.length eBuffer.length = 5	NullPointerException is thrown ArrayIndexOutOfBoundsExceptio n is thrown ArrayIndexOutOfBoundsExceptio n is thrown ArrayIndexOutOfBoundsExceptio	
compare compar	pareValue() with a null compareBuffer inpareOffset ≥ compareBuffer.length eBuffer.length = 5 eoffset = 5 eLength = 1 compareOffset < 0 eBuffer.length = 5 eoffset = -1 eLength = 1 inpareLength > compareBuffer.length eBuffer.length = 5	ArrayIndexOutOfBoundsException is thrown ArrayIndexOutOfBoundsException is thrown	
compare compar	npareOffset ≥ compareBuffer.length eBuffer.length = 5 eOffset = 5 eLength = 1 compareOffset < 0 eBuffer.length = 5 eOffset = -1 eLength = 1 npareLength > compareBuffer.length eBuffer.length = 5	ArrayIndexOutOfBoundsException is thrown ArrayIndexOutOfBoundsException is thrown	
compare compar	eBuffer.length = 5 eOffset = 5 eLength = 1 compareOffset < 0 eBuffer.length = 5 eOffset = -1 eLength = 1 npareLength > compareBuffer.length eBuffer.length = 5	n is thrown ArrayIndexOutOfBoundsExceptio n is thrown	
compare compar	eBuffer.length = 5 eOffset = 5 eLength = 1 compareOffset < 0 eBuffer.length = 5 eOffset = -1 eLength = 1 npareLength > compareBuffer.length eBuffer.length = 5	n is thrown ArrayIndexOutOfBoundsExceptio n is thrown	
compare compare compare compare	eoffset = 5 eLength = 1 compareOffset < 0 eBuffer.length = 5 eOffset = -1 eLength = 1 pareLength > compareBuffer.length eBuffer.length = 5	ArrayIndexOutOfBoundsException is thrown	
compare compare compare	compareOffset < 0 Buffer.length = 5 Coffset = -1 Elength = 1 CompareBuffer.length Buffer.length = 5	n is thrown	
3 compare compare	compareOffset < 0 Buffer.length = 5 Boffset = -1 Buffer.length = 1 Delength > compareBuffer.length Buffer.length = 5	n is thrown	
compare compare	eBuffer.length = 5 eOffset = -1 eLength = 1 npareLength >compareBuffer.length eBuffer.length = 5	n is thrown	
compare compare	eOffset = -1 eLength = 1 npareLength > compareBuffer.length eBuffer.length = 5		
compare	eLength = 1 npareLength >compareBuffer.length eBuffer.length = 5	ArrayIndexOutOfBoundsExceptio	
	npareLength >compareBuffer.length eBuffer.length = 5	ArrayIndexOutOfBoundsExceptio	
	eBuffer.length = 5		
compare	offgot - 0	n is thrown	
compare	editset = 0		
	eLength = 6		
5	compareOffset + compareLength	ArrayIndexOutOfBoundsExceptio	
	>compareBuffer.length	n is thrown	
	eBuffer.length = 5		
_	eOffset = 3		
	eLength = 3	A manufactor of David de Everantie	
6	<pre>compareLength < 0 eBuffer.length = 5</pre>	ArrayIndexOutOfBoundsExceptio	
	eoffset = 0	n is thrown	
_	eLength = -1		
	pendTLV with TAG: 0D and length 6		
-	Select Text String TLV		
	valueOffset ≥ Text String Length	ToolkitException.OUT_OF_TLV_	
	ffset = 6	BOUNDARIES is thrown	
compare	eBuffer.length = 15		
_	eOffset = 0		
	eLength = 1		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	ffset = -1 eBuffer.length = 15	BOUNDARIES is thrown	
	ebuller.length = 15 eOffset = 0		
_	eLength = 1		
	ompareLength > Text String length	ToolkitException.OUT_OF_TLV_	
	ffset = 0	BOUNDARIES is thrown	
compare	eBuffer.length = 15	20011271112010111101111	
	eOffset = 0		
	eLength = 7		
10 value	Offset + compareLength > Text String	ToolkitException.OUT_OF_TLV_	

	length	BOUNDARIES is thrown	<u> </u>
	valueOffset = 2	BOUNDARIES IS INIOWN	
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 5		
11	Initialise the handler		
	compareValue()	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown	
12	appendTLV with TAG: 0D and value: 04 00 01	_	
	0F		
	Select Text String TLV		
	Initialise compareBuffer		
	compareBuffer =		
	04 00 01 0F		
	Compare buffers	Result is 00h	
	<pre>valueOffset = 0 compareOffset = 0</pre>		
	compareLength = 17		
13	Initialise compareBuffer		
10	compareBuffer =		
	04 00 01 02 03		
	04 05 06 07 08		
	05 0A 0B 0C 0D		
	OE 10	D 11: 4	
4.4	Compare buffers with same parameters	Result is -1	
14	Initialise compareBuffer compareBuffer =		
	03 00 01 OF		
	Compare buffers with same parameters	Result is +1	
		I Coult io i i	
15			
15	Initialise compareBuffer		
15			
15	Initialise compareBuffer compareBuffer =		
15	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C		
15	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55		
15	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers	Result is 00h	
15	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2		
15	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3		
15	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2		
	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer =		
	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 50 2 01		
	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 02 01 03 04 05 06 07		
	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C		
	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 50 2 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55	Result is 00h	
16	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters		
	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 50 2 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55	Result is 00h	
16	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer	Result is 00h	
16	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 08 09 0A 0B 0C 08 09 0A 0B 0C 09 0A 0	Result is 00h	
16	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer = 55 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 00	Result is 00h	
16	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 55 55 55 55 55 55 55 55 55 55	Result is 00h Result is -1	
16	Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 55 Compare buffers valueOffset = 2 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 55 55 55 55 55 55 55 55 55 5	Result is 00h Result is -1 Result is +1	
16	Initialise compareBuffer	Result is 00h Result is -1	
16	Initialise compareBuffer	Result is 00h Result is -1 Result is +1	
16	Initialise compareBuffer	Result is 00h Result is -1 Result is +1	

6.2.5.10.4 Test Coverage

CRR number	Test case number
N1	12, 15, 18
N2	13, 16
N3	14, 17
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
C1	Does not apply for
	EnvelopeResponseHandl
	er
C2	11

6.2.5.11 Method findAndCopyValue(byte tag, byte[] dstBuffer, short valueOffset)

Test Area Reference: API_2_ERH_FACYB_BS

6.2.5.11.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

byte[] dstBuffer, short dstOffset)

throws java.lang.NullPointerException,

 ${\tt java.lang.ArrayIndexOutOfBoundsException,}$

ToolkitException

Normal execution

CRRN1: looks for the first occurrence of a TLV element from the beginning of a TLV list and copy its value into a destination buffer.

CRRN2: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN3: if the method is successful then the corresponding TLV becomes current and dstOffset + length of the copied value is returned.

CRRN4: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if dstBuffer is null NullPointerException shall be thrown.

CRRP2: if dstOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.5.11.3 Test Suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_FACYB_BS_1.scr

Test Applet: API_2_ERH_FACYB_BS_1.java

Load Script: API_2_ERH_FACYB_BS_1.ldr

API 2 ERH FACYB BS 1.par

6.2.5.11.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialise the handler	7 2.1000.00.00	
	findAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	appendTLV with TAG: 0D and length 16 Select Text String TLV		
	dstOffset ≥ dstBuffer.length tag = 0Dh dstBuffer.length = 20 dstOffset = 20	ArrayIndexOutOfBoundsExceptio n is thrown	
3	<pre>dstOffset < 0 dstBuffer.length = 20 dstOffset = -1</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
4	<pre>dstOffset + length >dstBuffer.length dstBuffer.length = 20 dstOffset = 5</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
5	<pre>length > dstBuffer.length dstBuffer.length = 15 dstOffset = 0</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
6	clear the handler, appendTLV with TAG 02 and Length 02		
	Select a TLV (tag 02h) findAndCopyValue()	ToolkitEveentien UNAVALIADI 5	
	tag = 03h	ToolkitException.UNAVAILABLE ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE _ELEMENT is thrown.	
7	appendTLV with TAG: 0D and value: 04 00 01 0F		
	Successful call Tag = 0Dh dstBuffer.length = 17 dstOffset = 0	Result of findAndCopyValue() is 17	
8	Compare buffer buffer = 04 00 01 0F	Result is 00h	
9	initialise dstBuffer dstBuffer = 55 55 55		
	Successful call dstBuffer.length = 20 dstOffset = 2	Result of findAndCopyValue() is 19	
10	Compare buffer buffer = 55 55 04 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F 55	Result is 00h	
11	clear the handler, appendTLV with TAG: 0D and value: 04 00 01 0F		
	append a 2 nd Text String TLV		
	Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0	Result of findAndCopyValue() is 17	
12	Compare buffer buffer = 04 00 01 0F	Result is 00h	
13	clear the handler, appendTLV with TAG: 0D and value: 04 00 01 0F		
	Successful call (with tag 8Dh)	Result of findAndCopyValue() is	

	tag = 8Dh	17	
	dstBuffer.length = 17		
	dstOffset = 0		
14	Compare buffer	Result is 00h	
	buffer = 04 00 01 0F		
15	Append tag 0Fh		<u> </u>
	buffer = 00 01 0F		
	Successful call (with tag 8Fh)	Result of findAndCopyValue() is	
	tag = 8Fh	16	
	dstBuffer.length = 16		
	dstOffset = 0		
16	Compare buffer	Result is 00h	
	buffer = 00 01 0F		

6.2.5.11.4 Test Coverage

CRR number	Test case number
N1	8, 10, 12
N2	6
N3	7, 9, 11
N4	13, 14, 15, 16
P1	1
P2	2, 3, 4, 5
C1	Does not apply for
	EnvelopeResponseHandl
	er

 6.2.5.12 Method findAndCopyValue(byte tag, byte occurrence, short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength)

Test Area Reference: API_2_ERH_FACYBBS_BSS

6.2.5.12.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: looks for the indicated occurrence of a TLV element from the beginning of a TLV list and copy its value into a destination buffer.

CRRN2: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN3: if the method is successful then the corresponding TLV becomes current and dstOffset + dstLength is returned.

CRRN4: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if dstBuffer is null NullPointerException shall be thrown.

CRRP2: if dstOffset or dstLength or both would cause access outside array bounds, or if dstLength is negative ArrayIndexOutOfBoundsException shall be thrown.

CRRP3: if valueOffset, dstLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.5.12.3 Test Suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_FACYBBS_BSS_1.scr

Test Applet: API_2_ERH_FACYBBS_BSS_1.java

Load Script: API_2_ERH_FACYBBS_BSS_1.ldr

Cleanup Script: API_2_ERH_FACYBBS_BSS_1.clr

Parameter File: API_2_ERH_FACYBBS_BSS_1.par

6.2.5.12.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialise the handler	•	•
	findAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	appendTLV with TAG: 0D and length 16		
	dstOffset ≥ dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	tag = 0Dh, occurrence = 1	n is thrown	
	valueOffset = 0		
	dstBuffer.length = 5		
	dstOffset = 5		
	dstLength = 1		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = -1		
	dstLength = 1	1 1 1 0 10/5 1 5 1	
4	dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>dstBuffer.length = 5 dstOffset = 0</pre>	n is thrown	
	dstOffset = 0 dstLength = 6		
5	dstDefigetr = 6 dstOffset + dstLength >dstBuffer.length	Array Inday Out Of Day and Evantin	
Э	dstBuffer.length = 5	ArrayIndexOutOfBoundsExceptio n is thrown	
	dstOffset = 3	n is thrown	
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 0	II IS UIIOWII	
	dstLength = -1		
7	appendTLV with TAG: 0D and length 6		
	valueOffset ≥ Text String Length	ToolkitException.OUT_OF_TLV_	
	tag = 0Dh, occurrence = 1	BOUNDARIES is thrown	
	valueOffset = 6		
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 1		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	valueOffset = -1	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	dstOffset = 0		
<u> </u>	dstLength = 1		
9	dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
	valueOffset = 0	BOUNDARIES is thrown	
	<pre>dstBuffer.length = 15 dstOffset = 0</pre>		
	dstOffset = 0 dstLength = 7		
<u> </u>	dechendin = /		

10	valueOffset + dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
	valueOffset = 2	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 5		
11	clear the handler, appendTLV with TAG 02		
	and Length 02		
	Select a TLV (tag 02h)		
	findAndCopyValue()	ToolkitException.UNAVAILABLE	
	tag = 0Dh	ELEMENT is thrown	
	occurrence = 2		
	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown.	
12	clear the handler and appendTLV with TAG:		
	0D and value: 04 00 01 0F		
	Successful call	Result of findAndCopyValue() is	
	tag = 0Dh, occurrence = 1	17	
	valueOffset = 0		
	dstBuffer.length = 17		
	dstOffset = 0		
40	dstLength = 17	D 11: 001	
13	Compare buffer	Result is 00h	
4.4	buffer = 04 00 01 0F		
14	initialise dstBuffer		
	dstBuffer = 55 55 55 Successful call	Result of findAndCopyValue() is	
	tag = 0Dh, occurrence = 1	. , , ,	
	valueOffset = 2	15	
	dstBuffer.length = 20		
	dstOffset = 3		
	dstLength = 12		
15	Compare buffer	Result is 00h	
	buffer =		
	55 55 55 01 02		
	03 04 05 06 07		
	08 09 0A 0B 0C		
40	55 55 55 55 55 55		
16	Append a Text String TLV		
	tag = 0D buffer = 00 11 22 33 44 55 (no specific		
	DCS byte)		
	Successful call	Result of findAndCopyValue() is	
	tag = 0Dh, occurrence = 1	17	
	valueOffset = 0		
	dstBuffer.length = 20		
	dstOffset = 0		
	dstLength = 17		
17	Compare buffer	Result is 00h	
40	buffer = 04 00 01 0F Successful call	D	
18		Result of findAndCopyValue() is	
	<pre>tag = 0Dh, occurrence = 2 valueOffset = 0</pre>	6	
	dstBuffer.length = 6		
	dstOffset = 0		
	dstLength = 6		
19	Compare buffer	Result is 00h	
	buffer = 00 11 22 33 44 55		
20	clear the handler and appendTLV with TAG:		
	0D and value: 04 00 01 0F		
	Successful call (with tag 8Dh)	Result of findAndCopyValue () is	
	tag = 8Dh	17	
	occurrence = 1		
	valueOffset = 0		
	dstBuffer.length = 17		
	<pre>dstBuffer.length = 17 dstOffset = 0</pre>		
24	<pre>dstBuffer.length = 17 dstOffset = 0 dstLength = 17</pre>	Popult is 00b	
21	<pre>dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer</pre>	Result is 00h	
	<pre>dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F</pre>	Result is 00h	
21	<pre>dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F Append tag 0Fh</pre>	Result is 00h	
	<pre>dstBuffer.length = 17 dstOffset = 0 dstLength = 17</pre>		
	<pre>dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F Append tag 0Fh</pre>	Result is 00h Result of findAndCopyValue () is 16	

	occurrence = 1		
	<pre>valueOffset = 0</pre>		
	dstBuffer.length = 16		
	dstOffset = 0		
	dstLength = 16		
23	Compare buffer	Result is 00h	
	buffer = 00 01 0F		
24	Successful call, findAndCopyValue with	Result of findAndCopyValue () is	
	length =0	16	
	dstBuffer.length = 16		
	dstOffset = 16		
	dstLength = 0		

6.2.5.12.4 Test Coverage

CRR number	Test case number
N1	13, 15, 17, 19
N2	11
N3	12, 14, 16, 18, 24
N4	20, 21, 22, 23
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
C1	Does not apply for
	EnvelopeResponseHandl
	er

6.2.5.13 Method findAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset)

Test Area Reference: API_2_ERH_FACRB_BS

6.2.5.13.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public byte findAndCompareValue(byte tag,

byte[] compareBuffer,
short compareOffset)

throws java.lang.NullPointerException,

java.lang.ArrayIndexOutOfBoundsException,

ToolkitException

Normal execution

Looks for the first occurrence of a TLV element from beginning of a TLV list and compare its value with a buffer:

CRRN1: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN2: if the method is successful then the corresponding TLV becomes current.

CRRN3: if identical returns 0.

CRRN4: if the first miscomparing byte in simple TLV is less than that in compareBuffer returns -1.

CRRN5: if the first miscomparing byte in simple TLV is greater than that in compareBuffer returns 1.

CRRN6: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if compareBuffer is null NullPointerException shall be thrown.

CRRP2: if compareOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.5.13.3 Test Suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_FACRB_BS_1.scr

Test Applet: API_2_ERH_FACRB_BS_1.java

Load Script: API_2_ERH_FACRB_BS_1.ldr

Cleanup Script: API_2_ERH_FACRB_BS_1.clr

Parameter File: API 2 ERH FACRB BS 1.par

6.2.5.13.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	appendTLV with TAG: 0D and length 16	·	•
	findAndCompareValue() with a null dstBuffer and	NullPointerException is thrown	
	tag 0Dh	·	
2			
	compareOffset ≥ compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	tag = 0Dh	n is thrown	
	compareBuffer.length = 20		
3	compareOffset = 20 compareOffset < 0	Arroy IndovOutOfDoundoEvoontio	
3	compareBuffer.length = 20	ArrayIndexOutOfBoundsException is thrown	
	compareOffset = -1	n is thrown	
4	compareOffset + length >	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length	n is thrown	
	compareBuffer.length = 20		
	compareOffset = 5		
5	length > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 15	n is thrown	
	compareOffset = 0		
6	clear the handler, appendTLV with TAG 02		
	and Length 02		
	Select a TLV (tag 02h)	T HEE C LINIANAMARIE	
	<pre>findAndCompareValue() tag = 03h</pre>	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown	
7	Verify current TLV	ToolkitException.UNAVAILABLE	
_	getValueLength()	_ELEMENT is thrown.	
8	clear the handler and appendTLV with TAG: 0D and value: 04 00 01 0F		
	Initialise compareBuffer		
	compareBuffer =		
	04 00 01 0F		
	Compare buffers	Result is 00h	
	tag = 0Dh		
	compareOffset = 0		
9	Verify current TLV	Result is 17	
40	getValueLength()		
10	Initialise compareBuffer		
	compareBuffer = 04 00 01 10		
	Compare buffers with same parameters	Result is -1	
11	Initialise compareBuffer	Vesuit is - I	
111	initialise comparebuller		

	compareBuffer =		
	03 00 01 OF		
	Compare buffers with same parameters	Result is +1	
12	Initialise compareBuffer	Trocal lo 11	
12			
	compareBuffer =		
	55 55 04 00 01		
	02 03 04 05 06		
	07 08 09 0A 0B		
	OC OD OE OF 55		
	Compare buffers	Result is 00h	
	compareOffset = 2		
13	append a Text String TLV		
	tag = ODh		
	buffer = 00 11 22 33 44 55		
	Initialise compareBuffer		
	compareBuffer =		
	55 55 04 00 01		
	02 03 04 05 06		
	07 08 09 0A 0B		
	OC OD OE OF 55		
	Compare buffers	Result is 00h	
	compareOffset = 2		
14	Initialise compareBuffer		
	compareBuffer =		
	55 55 04 01 01		
	02 03 04 05 06		
	07 08 09 0A 0B		
	OC OD OE OF 55		
	Compare buffers	Result is -1	
	compareOffset = 2		
15	Initialise compareBuffer		
	compareBuffer =		
	55 55 04 00 01		
	02 03 04 05 06		
	07 08 09 0A 0B		
	0C 0D 0D 10 55		
		Deput is 14	
	Compare buffers	Result is +1	
40	compareOffset = 2		
16	clear the handler and appendTLV with TAG:		
	0D and value: 04 00 01 0F		
	Initialise compareBuffer		
	compareBuffer = 04 00 01 0F		
	Successful call (with tag 8Dh)	Result is 00h	
	tag = 8Dh		
	compareBuffer.length = 17		
	compareOffset = 0		
17	Append tag 0Fh		
.,	buffer = 00 01 0F		
	Initialise compareBuffer		
	compareBuffer = 00 01 0F		
		Result is 00h	
	Successful call (with tag 8Fh)		
	Successful call (with tag 8Fh)	Tresuit is doi!	
	tag = 8Fh	Tresult is out	
	` ` ,	Trosuit is out	

6.2.5.13.4 Test Coverage

CRR number	Test case number
N1	6,7
N2	7,9
N3	8, 13, 12
N4	10, 14
N5	11, 15
N6	17, 16
P1	1
P2	2, 3, 4, 5
C1	Does not apply for
	Envelope response
	handler

 6.2.5.14 Method findAndCompareValue(byte tag, byte occurrence, short valueOffset, byte[] compareBuffer, short compareOffset, short compareLength)

Test Area Reference: API_2_ERH_FACRBBS_BSS

6.2.5.14.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

byte occurrence,
short valueOffset,
byte[] compareBuffer,
short compareOffset,
short compareLength)

throws java.lang.NullPointerException,
 java.lang.ArrayIndexOutOfBoundsException,

 ${\tt ToolkitException}$

Normal execution

Looks for the indicated occurrence of a TLV element from the beginning of a TLV list and compare its value with a buffer:

CRRN1: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN2: if the method is successful then the corresponding TLV becomes current.

CRRN3: if identical 0 is returned.

CRRN4: if the first miscomparing byte in simple TLV is less than that in compareBuffer -1 is returned.

CRRN5: if the first miscomparing byte in simple TLV is greater than that in compareBuffer 1 is returned

CRRN6: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if compareBuffer is null NullPointerException shall be thrown.

CRRP2: if compareOffset or compareLength or both would cause access outside array bounds, or if compareLength is negative ArrayIndexOutOfBoundsException shall be thrown.

CRRP3: if valueOffset, compareLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

CRRP4: if an input parameter is not valid (e.g. occurrence = 0) an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException BAD_INPUT_PARAMETER.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.5.14.3 Test Suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_FACRBBS_BSS_1.scr

Test Applet: API_2_ERH_FACRBBS_BSS_1.java

Load Script: API_2_ERH_FACRBBS_BSS_1.ldr

Cleanup Script: API_2_ERH_FACRBBS_BSS_1.clr

Parameter File: API 2 ERH FACRBBS BSS 1.par

6.2.5.14.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialise the handler		
	findAndCompareValue() with a null compareBuffer	NullPointerException is thrown	
2	clear the handler and appendTLV with TAG:		
	0D and value: 04 00 01 0F		
	compareOffset ≥ compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	tag = 0Dh, occurrence = 1	n is thrown	
	valueOffset = 0		
	compareBuffer.length = 5		
	<pre>compareOffset = 5 compareLength = 1</pre>		
3	compareDeffset < 0	ArrayIndexOutOfBoundsExceptio	
٥	compareBuffer.length = 5	n is thrown	
	compareOffset = -1	II IS UIIOWII	
	compareLength = 1		
4	compareLength >compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 5	n is thrown	
	compareOffset = 0		
	compareLength = 6	1 1 1 0 10/5	
5	compareOffset + compareLength	ArrayIndexOutOfBoundsExceptio	
	>compareBuffer.length	n is thrown	
	<pre>compareBuffer.length = 5 compareOffset = 3</pre>		
	compareLength = 3		
6	compareLength < 0	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 5	n is thrown	
	compareOffset = 0		
	compareLength = -1		
7	clear the handler and appendTLV with TAG		
	and length of 6		
	valueOffset ≥ Text String Length	ToolkitException.OUT_OF_TLV_	
	tag = 0Dh, occurrence = 1	BOUNDARIES is thrown	
	valueOffset = 6		
	compareBuffer.length = 15		
	compareOffset = 0		
8	<pre>compareLength = 1 valueOffset < 0</pre>	ToolkitException.OUT_OF_TLV_	
0	valueOffset = -1	BOUNDARIES is thrown	
	compareBuffer.length = 15	POONDANIES IS UITOWIT	
	compareOffset = 0		
	compareLength = 1		
9	compareLength > Text String length	ToolkitException.OUT_OF_TLV_	

	<pre>valueOffset = 0</pre>	BOUNDARIES is thrown	
	<pre>compareBuffer.length = 15</pre>		
	compareOffset = 0		
	compareLength = 7		
10	valueOffset + compareLength > Text String	ToolkitException.OUT_OF_TLV_	
	length	BOUNDARIES is thrown	
	valueOffset = 2		
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 5		
11	Invalid parameter	ToolkitException.BAD_INPUT_P	
	occurrence = 0	ARAMETER is thrown	
12	appendTLV with TAG 02 and length 02	ARAWETER IS UTOWIT	
12			
	Select a TLV (tag 02h)		
	findAndCompareValue()	ToolkitException.UNAVAILABLE	
	tag = ODh	_ELEMENT is thrown	
	occurrence = 2		
13	Verify current TLV	ToolkitException.UNAVAILABLE	
	getValueLength()	_ELEMENT is thrown.	
14	clear the handler and appendTLV with TAG:		
	0D and value: 04 00 01 0F		
	Initialise compareBuffer		
	compareBuffer =		
	04 00 01 0F		
	findAndCompareValue()	Result is 00h	
	tag = 0Dh, occurrence = 1	Result is out	
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 17		
15	Verify current TLV	Result is 17	
15		Result is 17	
40	getValueLength()		
16	Initialise compareBuffer		
	compareBuffer =		
	04 00 01 10		
		I Docult ic 1	
	Compare buffers with same parameters	Result is -1	
17	Initialise compareBuffer	Result is -1	
17	Initialise compareBuffer compareBuffer =	Result is -1	
17	Initialise compareBuffer compareBuffer = 03 00 01 0F		
17	Initialise compareBuffer compareBuffer =	Result is +1	
17	Initialise compareBuffer compareBuffer = 03 00 01 0F		
	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters		
	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer		
	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer =		
	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02		
	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55		
	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C		
	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2	Result is +1	
	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3	Result is +1	
18	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12	Result is +1	
	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer	Result is +1	
18	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 05 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer =	Result is +1	
18	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 55 02 01	Result is +1	
18	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 02 01 03 04 05 06 07	Result is +1	
18	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C	Result is +1	
18	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 55 55 55 55 55 55 55 55	Result is +1 Result is 00h	
18	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 Compare buffers with same parameters	Result is +1	
18	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 55 55 55 55 55 55 55 55	Result is +1 Result is 00h	
19	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 Compare buffers with same parameters	Result is +1 Result is 00h	
19	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer	Result is +1 Result is 00h	
19	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer compareBuffer =	Result is +1 Result is 00h	
19	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 05 55 55 55 55 Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 55 55 55 55 55 55 55 55 55 5	Result is +1 Result is 00h	
19	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 05 55 55 55 02 01 02 03 04 05 06 07 08 09 0A 0B 0C 05 05 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 05 05 05 05 02 01 03 04 05 06 07 08 09 0A 0B 0C 05 05 05 05 05 00 00 00 00 00 00 00 00	Result is +1 Result is 00h	
19	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 05 55 55 55 02 01 02 03 04 05 06 07 08 09 0A 0B 0C 05 05 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 05 05 05 05 02 01 03 04 05 06 07 08 09 0A 0B 0C 05 05 05 05 05 00 00 00 00 00 00 00 00	Result is +1 Result is 00h	
19	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 05 55 55 55 55 02 01 02 03 04 05 06 07 08 09 0A 0B 0C 05 55 55 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 05 55 55 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 05 55 55 55 55 55 02 01 02 03 04 05 06 07 08 09 0A 0B 0C 05 05 05 00 02 03 04 05 06 07 08 09 0A 0A 0D 05 05 05 05 05 05 05 05 05 05 05 05 05	Result is +1 Result is 00h Result is -1	
19	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 05 55 55 55 02 01 02 03 04 05 06 07 08 09 0A 0B 0C 05 05 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 05 05 05 05 02 01 03 04 05 06 07 08 09 0A 0B 0C 05 05 05 05 05 00 00 00 00 00 00 00 00	Result is +1 Result is 00h Result is -1	
19	Initialise compareBuffer	Result is +1 Result is 00h Result is -1	
19	Initialise compareBuffer	Result is +1 Result is 00h Result is -1	
19	Initialise compareBuffer	Result is +1 Result is 00h Result is -1	
19	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 05 55 55 55 55 55 55 55 55 55 55 55 55	Result is +1 Result is 00h Result is -1	
19	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 05 55 55 55 55 02 01 Initialise compareBuffer compareLength = 12 Initialise compareBuffer compareBuffer = 55 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 05 05 05 05 05 00 00 00 00 00 00 00 00	Result is +1 Result is 00h Result is -1	
19	Initialise compareBuffer compareBuffer = 03 00 01 0F Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0B 0C 05 55 55 55 55 55 55 55 55 55 55 55 55	Result is +1 Result is 00h Result is -1	

	valueOffset = 0		
	compareOffset = 0		
	compareLength = 17		
22	Initialise compareBuffer		
	compareBuffer =		
	00 11 22 33 44 55		
	findAndCompareValue()	Result is 00h	
	tag = 0Dh, occurrence = 2		
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 6		
23	Initialise compareBuffer		
	compareBuffer =		
	00 11 22 33 44 66		
	findAndCompareValue()	Result is -1	
	tag = 0Dh, occurrence = 2	Trooding to	
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 6		
24	clear the handler and appendTLV with TAG:		
	0D and value: 04 00 01 0F		
	Initialise compareBuffer		
	compareBuffer = 04 00 01 OF		
	Successful call (with tag 8Dh)	Result is 00h	
	tag = 8Dh, occurrence = 1	Tresdit is som	
	valueOffset = 0		
	compareBuffer.length = 17		
	compareOffset = 0		
	compareLength = 17		
25	Append tag 0Fh		
	buffer = 00 01 0F		
	Initialise compareBuffer		
	compareBuffer = 00 01 0F		
	Successful call (with tag 8Fh)	Result is 00h	
	tag = 8Fh, occurrence = 1		
	valueOffset = 0		
	compareBuffer.length = 16		
	compareOffset = 0		
	compareLength = 16		
26	Successful call, findAndCompareValue with	Result of findAndCompareValue	
	length =0	() is 00	
	CompareBuffer.length = 16	V	
	compareOffset = 16		
	compareLength = 0		

6.2.5.14.4 Test Coverage

CRR number	Test case number
N1	12,13
N2	15,13
N3	14, 18, 22, 21, 26
N4	16, 19, 23
N5	17, 19
N6	25, 24
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
P4	11
C1	Does not apply for
	EnvelopeResponseHandl
	er

- 6.2.5.15 Method appendArray

Test Area Reference: API_2_ERH_APDA_BSS

6.2.5.15.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: appends a buffer into the EditHandler buffer

CRRN2: a successful append does not modify the TLV selected

Parameters error

CRRP1: if buffer is null, a java.lang.NullPointerException is thrown

CRRP2: if offset or length or both would cause access outside the array bounds, or if length is negative, a java.lang.ArrayIndexOutOfBoundsException is thrown.

Context errors

CRRC1: if the EditHandler buffer is too small to append the requested data, a ToolkitException is thrown with reason code HANDLER_OVERFLOW

CRRC2: if the EditHandler buffer is busy, a ToolkitException is thrown with reason code HANDLER_NOT_AVAILABLE

6.2.5.15.2 Test suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_APDA_BSS_1.scr

Test Applet: API_2_ERH_APDA_BSS_1.java

Load Script: API_2_ERH_APDA_BSS_1.ldr

Cleanup Script: API_2_ERH_APDA_BSS_1.clr

Parameter File: API 2 ERH APDA BSS 1.par

6.2.5.15.3 Test procedure

ld	Description	API Expectation	APDU Expectation
	Initialize the envelope response handler with a		
	TLV of length 1		
1	Null buffer	NullPointerException is thrown	
2	offset ≥ buffer.length	ArrayIndexOutOfBoundsExceptio	
	buffer.length = 5	n is thrown	
	offset = 5		
_	length = 1	Assessed and a second Office and the	
3	<pre>offset < 0 buffer.length = 5</pre>	ArrayIndexOutOfBoundsException is thrown	
	offset = -1	n is thrown	
	length = 1		
4	length > buffer.length	ArrayIndexOutOfBoundsExceptio	
	buffer.length = 5	n is thrown	
	offset = 0		
	length = 6	A 1 1 0 (O(D 1 5))	
5	offset + length > buffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>buffer.length = 5 offset = 3</pre>	n is thrown	
	length = 3		
6	length < 0	ArrayIndexOutOfBoundsExceptio	
	buffer.length = 5	n is thrown	
	offset = 0		
	length = -1	T WE C LINE OF	
7	Handler overflow	ToolkitException.HANDLER_OV	
	<pre>buffer.length = 256 offset = 0</pre>	ERFLOW is thrown	
	length = 256		
8	append the handler with TLVs:		
	81 03 11 22 33		
	82 02 99 77		
	findTLV 0x81		
	Successful call		
	<pre>buffer = FF FE F8 offset = 0</pre>		
	length = 8		
	Verify Current TLV: Call getValueLength()	Result is 03h	
9	Clear the handler	Tresdit is self	
Ť	Successful call		
	buffer = FF FE F8		
	offset = 0		
	length = 8		
	Call copy() method		
	Compare handler	Result is 00h	
10	compareBuffer = FF FE F8 Successful call		
10	buffer = 00 01 07		
	offset = 2		
L	length = 6		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = FF FE F8 02 03 07		
11	Successful call		
	buffer = 11 22 88 offset = 2		
	offset = 2 length = 4		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = FF FE F8 02 03 07 33	1.0031110 0011	
	44 55 66		

6.2.5.15.4 Test Coverage

CRR number	Test case number
N1	9, 10, 11
N2	8
N3	
P1	1
P2	2, 3, 4, 5, 6
C1	7
C2	Does not apply for
	EnvelopeResponseHandl
	er

6.2.5.16 Method appendTLV(byte tag, byte value)

Test Area Reference: API_2_ERH_APTLBB

6.2.5.16.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: Appends a TLV element to the current TLV list (1-byte element).

CRRN2: A successful append does not modify the TLV selected.

Parameters error

No requirements

Context errors

CRRC1: if the EditHandler buffer is too small to append the requested data, a ToolkitException is thrown with reason code HANDLER_OVERFLOW

CRRC2: if the EditHandler buffer is busy, a ToolkitException is thrown with reason code $HANDLER_NOT_AVAILABLE$

6.2.5.16.2 Test suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_APTLBB_1.scr

Test Applet: API_2_ERH_APTLBB_1.java

Load Script: API_2_ERH_APTLBB_1.ldr

Cleanup Script: API_2_ERH_APTLBB_1.clr

Parameter File: API_2_ERH_APTLBB_1.par

6.2.5.16.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call appendArray()	·	•
	length = 253		
	Handler Overflow: Call twice the	ToolkitException.HANDLER_OV	
	appendTLV()method	ERFLOW is thrown by one of the	
		two.	
2	append the handler with TLVs:		
	81 03 11 22 33		
	82 02 99 77		
	Select Command Details TLV		
	Call the appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	
3	Clear the handler		
	Successful call		
	tag = 84h		
	value = 00h		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = 84 01 00		
4	Successful call		
	tag = 01h		
	value = FEh		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = 84 01 00 01 01 FE		

Note: Test case 1 call twice appendTLV because the current 03.19 [7] is not clear enough on this point. So this test allows the two possible implementations.

6.2.5.16.4 Test Coverage

CRR number	Test case number	
N1	3, 4	
N2	2	
C1	1	
C2	Does not apply for	
	EnvelopeResponseHandl	
	er	

- 6.2.5.17 Method appendTLV(byte tag, byte value1, byte value2)

Test Area Reference: API_2_ERH_APTLBBB

6.2.5.17.1 Conformance requirements:

The method with following header shall be compliant to its definition in the API.

void appendTLV (byte tag, byte value1,byte value2)
throws ToolkitException

Normal execution

CRRN1: Appends a TLV element to the current TLV list (2-byte element).

CRRN2: A successful append does not modify the TLV selected.

Parameters error

No requirements

Context errors

CRRC1: if the EditHandler buffer is too small to append the requested data, a ToolkitException is thrown with reason code HANDLER_OVERFLOW

 $CRRC2: if the \ Edit Handler \ buffer \ is \ busy, \ a \ Toolkit Exception \ is \ thrown \ with \ reason \ code \\ HANDLER_NOT_AVAILABLE$

6.2.5.17.2 Test suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_APTLBBB_1.scr

Test Applet: API_2_ERH_APTL BBB_1.java

Load Script: API_2_ERH_APTL BBB_1.ldr

Cleanup Script: API_2_ERH_APTLBBB_1.clr

Parameter File: API 2 ERH APTLBBB 1.par

6.2.5.17.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call the appendArray with length of 253		-
	Handler Overflow: Call the appendTLV()	ToolkitException.HANDLER_OV	
	method	ERFLOW is thrown	
2	clear the handler, append the handler with		
	TLVs:		
	81 03 11 22 33		
	82 02 99 77		
	Select Command Details TLV		
	Call the appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	
3	Clear the handler		
	Successful call		
	tag = 84h		
	value1 = 00h		
	value2 = 01h		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = 84 02 00 01		
4	Successful call		
	tag = 01h		
	value1 = FEh		
	value2 = FDh		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = 84 02 00 01 01 02 FE FD		

6.2.5.17.4 Test Coverage

CRR number	Test case number	
N1	3, 4	
N2	2	
C1	1	
C2	Does not apply for	
	EnvelopeResponseHandl	
	er	

 6.2.5.18 Method appendTLV(byte tag, byte[] value, short valueoffset, short valuelength)

Test Area Reference: API_2_ERH_APTLB_BSS

6.2.5.18.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: Appends a TLV element to the current TLV list (byte-array element).

CRRN2: A successful append does not modify the TLV selected.

Parameters error

CRRP1: if value is null, a java.lang.NullPointerException is thrown

CRRP2: if valueoffset or valuelength or both would cause access outside the array bounds, or if length is negative, a java.lang.ArrayIndexOutOfBoundsException is thrown.

Context errors

CRRC1: if the EditHandler buffer is too small to append the requested data, a ToolkitException is thrown with reason code HANDLER_OVERFLOW

CRRC2: if the EditHandler buffer is busy, a ToolkitException is thrown with reason code HANDLER_NOT_AVAILABLE

CRRC3: if valuelength is greater than 255, a ToolkitException is thrown with reason code BAD_INPUT_PARAMETER

6.2.5.18.2 Test suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_APTLB_BSS_1.scr

Test Applet: API_2_ERH_APTLB_BSS_1.java

Load Script: API_2_ERH_APTLB_BSS_1.ldr

Cleanup Script: API_2_ERH_APTLB_BSS_1.clr

Parameter File: API_2_ERH_APTLB_BSS_1.par

6.2.5.18.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Null value	NullPointerException is thrown	Ar bo Expectation
2	valueOffset ≥ value.length	ArrayIndexOutOfBoundsExceptio	
_	value.length = 5	n is thrown	
	valueOffset = 5		
	valueLength = 1		
3	valueOffset < 0	ArrayIndexOutOfBoundsExceptio	
	<pre>value.length = 5 valueOffset = -1</pre>	n is thrown	
	valueLength = 1		
4	valueLength > value.length	ArrayIndexOutOfBoundsExceptio	
	value.length = 5	n is thrown	
	valueOffset = 0		
_	valueLength = 6	A da da conto (Da con da Fora da G	
5	ValueOffset + valueLength > value.length value.length = 5	ArrayIndexOutOfBoundsExceptio n is thrown	
	valueOffset = 3	n is thrown	
	valueLength = 3		
6	valueLength < 0	ArrayIndexOutOfBoundsExceptio	
	value.length = 5	n is thrown	
	<pre>valueOffset = 0 valueLength = -1</pre>		
7	Handler overflow	ToolkitException.HANDLER_OV	
'	value.length = 254	ERFLOW is thrown	
	valueOffset = 0		
	valueLength = 254		
8	Bad parameter	ToolkitException.BAD_INPUT_P	
	<pre>value.length = 256 valueOffset = 0</pre>	ARAMETER is thrown	
	valueLength = 256		
9	clear the handler, append the handler with		
•	TLVs:		
	81 03 11 22 33		
	82 02 99 77		
	Select Command Details TLV		
	Successful call		
	tag = 04 value = FF FE F8		
	valueOffset = 0		
	valueLength = 8		
	Verify Current TLV: Call getValueLength()	Result is 03h	
10	Clear the handler		
	Successful call		
	tag = 04 value = FF FE F8		
	valueOffset = 0		
	valueLength = 8		
	Call copy() method		
	Compare handler	Result is 00	
4.4	CompareBuffer = 04 08 FF FE F8		
11	Successful call		
	value = 00 01 07		
	valueOffset = 2		
	valueLength = 6		
	Call copy() method	D Wi oo	
	Compare handler	Result is 00	
	compareBuffer = 04 08 FF FE F8 85 06 02 03 07		
12	Successful call		
	tag = 01		
	value = 11 22 88		
	valueOffset = 2		
	valueLength = 4		
	Call copy() method	Pocult is 00	
	Compare handler compareBuffer = 04 08 FF FE F8 85 06 02	Result is 00	
	03 07 01 04 33 44 55 66		
13	Clear the handler		
	•	· '	

Successful call		
tag = 04		
value = 00 01 7F		
<pre>valueOffset = 0</pre>		
valueLength = 80h		
Call copy() method		
Compare handler	Result is 00	
compareBuffer = 04 81 80 00 017F		

6.2.5.18.4 Test Coverage

CRR number	Test case number
N1	10, 11, 12, 13
N2	9
P1	1
P2	2, 3, 4, 5, 6
C1	7
C2	Does not apply for
	EnvelopeResponseHandl
	er
C3	8

6.2.5.19 Method appendTLV(byte tag, byte value1, byte[] value2, short value2offset, short value2length)

Test Area Reference: API_2_ERH_APTLBB_BSS

6.2.5.19.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: Appends a TLV element to the current TLV list (1 byte and a byte-array element).

CRRN2: A successful append does not modify the TLV selected.

Parameters error

CRRP1: if value2 is null, a java.lang.NullPointerException is thrown

CRRP2: if value2offset or value2length or both would cause access outside the array bounds, or if length is negative, a java.lang.ArrayIndexOutOfBoundsException is thrown.

Context errors

CRRC1: if the EditHandler buffer is too small to append the requested data, a ToolkitException is thrown with reason code HANDLER_OVERFLOW

CRRC2: if the EditHandler buffer is busy, a ToolkitException is thrown with reason code HANDLER_NOT_AVAILABLE

CRRC3: if valuelength is greater than 255, a ToolkitException is thrown with reason code BAD_INPUT_PARAMETER

6.2.5.19.2 Test suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_APTLBB_BSS_1.scr

Test Applet: API_2_ERH_APTLBB_BSS_1.java

Load Script: API_2_ERH_APTLBB_BSS_1.ldr

Cleanup Script: API_2_ERH_APTLBB_BSS_1.clr

Parameter File: API_2_ERH_APTLBB_BSS_1.par

6.2.5.19.3 Test procedure

1.1	Depolette	ADI Famoutation	ADDILE:
ld	Description	API Expectation	APDU Expectation
1	Null value2	NullPointerException is thrown	
2	value2Offset ≥ value2.length	ArrayIndexOutOfBoundsExceptio	
	value2.length = 5	n is thrown	
	value20ffset = 5		
3	value2Length = 1 value2Offset < 0	Array Inday Out Of Day and Evantin	
3	value2.length = 5	ArrayIndexOutOfBoundsExceptio	
	value20ffset = -1	n is thrown	
	value2Length = 1		
4	value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
•	value2.length = 5	n is thrown	
	value2Offset = 0		
	value2Length = 6		
5	value2Offset + value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
	value2.length = 5	n is thrown	
	value20ffset = 3		
_	value2Length = 3	Amerika day Oyd Off	
6	value2Length < 0	ArrayIndexOutOfBoundsExceptio	
	<pre>value2.length = 5 value20ffset = 0</pre>	n is thrown	
	value2Length = -1		
7	Handler overflow	ToolkitException.HANDLER_OV	
•	value2.length = 254	FRFLOW is thrown	
	value2Offset = 0	ETA ESTA IS ANOWN	
	value2Length = 254		
8	Bad parameter	ToolkitException.BAD_INPUT_P	
	value2.length = 256	ARAMETER is thrown	
	value2Offset = 0		
	value2Length = 256		
9	clear the handler, append the handler with		
	TLVs:		
	81 03 11 22 33 82 02 99 77		
	Select Command Details TLV		
	Successful call		
	tag = 04		
	value1 = 05		
	value2 = FF FE F8		
	value2Offset = 0		
	value2Length = 8		
	Verify Current TLV: Call getValueLength()	Result is 03h	
10	Clear the handler		
	Successful call		
	tag = 04		
	value1 = 05		
	<pre>value2 = FF FE F8 value20ffset = 0</pre>		
	value2Length = 8		
	Call copy() method		
	Compare handler	Result is 00	
	Compare Handler CompareBuffer = 04 09 05 FF FE F8	INESUIL IS OU	
11	Successful call		
	tag = 85h		
	1 603 9311	1	

value1 = 55h value2 = 00 01 07 value20ffset = 2 value2Length = 6 Call copy() method Compare handler Result is 00	
<pre>value2Offset = 2 value2Length = 6 Call copy() method Compare handler Result is 00</pre>	
value2Length = 6 Call copy() method Compare handler Result is 00	
Call copy() method Compare handler Result is 00	
Compare handler Result is 00	
compareBuffer =	
04 09 05 FF FE F8	
85 07 55 02 03 07	
12 Successful call	
tag = 01	
value1 = 44h	
value2 = 11 22 88	
value2Offset = 2	
value2Length = 4	
Call copy() method	
Compare handler Result is 00	
CompareBuffer =	
04 09 05 FF FE F8	
85 07 55 02 03 07	
01 05 44 33 44 55 66	
13 Clear the handler	
Successful call	
tag = 04	
value1 = 00	
value2 = 01 7F	
value2Offset = 0	
value2Length = 7Fh	
Call copy() method	
Compare handler Result is 00	
compareBuffer = 04 81 80 00 017F	

6.2.5.19.4 Test Coverage

CRR number	Test case number
N1	10, 11, 12, 13
N2	9
P1	1
P2	2, 3, 4, 5, 6
C1	7
C2	Does not apply for
	EnvelopeResponseHandl
	er
C3	8

- 6.2.5.20 Method clear

Test Area Reference: API_2_ERH_CLER

6.2.5.20.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API. $_{\tt void\ clear()}$

throws ToolkitException

Normal execution

CRRN1: Clears the TLV list of an EditHandler and resets the current TLV selected.

Parameters error

No requirements

Context errors

CRRC1: if the EditHandler buffer is busy, a ToolkitException is thrown with reason code HANDLER_NOT_AVAILABLE

6.2.5.20.2 Test suite files

Specific triggering: Unrecognized Envelope

Test Script: API_2_ERH_CLER_1.scr

Test Applet: API_2_ERH_CLER_1.java

Load Script: API_2_ERH_CLER_1.ldr

Cleanup Script: API_2_ERH_CLER_1.clr

Parameter File: API_2_ERH_CLER_1.par

6.2.5.20.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	append the handler with TLVs:	Result of getLength() is not null	
	81 03 11 22 33		
	82 02 99 77		
	Select Command Details TLV		
	Call the getLength() method		
	Clear the handler	Result of getLength() is 0	
	Call the getLength() method		
2	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown	

6.2.5.20.4 Test Coverage

CRR number	Test case number	
N1	1, 2	
C1	Does not apply for	
	EnvelopeResponseHandl	
	er	

6.2.6 Class MEProfile

6.2.6.1 Method check (byte index)

Test Area Reference: API_2_MEP_CHECB 6.2.6.1.1 Conformance requirement:

The method with following header shall compliant to its definition in the API.

Normal execution

CRRN1: The method checks a facility in the handset profile: returns true if supported and false **#** not.otherwise.

Parameters error

CRRP1: The method shall throw ME_PROFILE_NOT_AVAILABLE ToolkitException if Terminal Profile data are not available

Context errors

No requirements

Context errors

<u>CRRC1: The method shall throw ME_PROFILE_NOT_AVAILABLE ToolkitException if Terminal Profile data are not available</u>

6.2.6.1.2 Test suite files

Specific triggering:

UNFORMATTED SMS PP UPDEVENT STATUS COMMAND

No Additional requirements for the GSM personalisation:

Test Script: API_2_MEP_CHECB_1.scr

Test Applet: API_2_MEP_CHECB_1.java

Load Script: API_2_MEP_CHECB_1.ldr (the applet is loaded without

INI after the reset (RST)

Cleanup Script: API_2_MEP_CHECB_1.clr

Parameter File: API 2 MEP CHECB 1.par

6.2.6.1.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1		ME_PROFILE_NOT_AVAILABLE	
	Triggered by status commandunformatted SMS	ToolkitException is thrown	
	Index = 1		
2	Terminal Profile, Facility is supported	true is returned by the method	
	index = 0	•	
3	Terminal Profile, Facility is not supported	false is returned by the method	
	<u>i</u> ±ndex = 15	·	

6.2.6.1.4 Test Coverage

CRR number	Test case number
N1	2,3
P1	4
<u>C1</u>	<u>1</u>

6.2.6.2 Method check (byte [] mask, short offset, short length)

Test Area Reference: API_2_MEP_CHEC_BSS

6.2.6.2.1 Conformance requirement:

The method with following header shall compliant to its definition in the API.

public static boolean check(byte[] mask,

short offset,
short length)

throws java.lang.NullPointerException,

 ${\tt java.lang.ArrayIndexOutOfBoundsException,}$

 ${\tt ToolkitException}$

Normal execution

CRRN1: The method checks all the facilities corresponding to bits set to 1 in the mask buffer: returns true if they are all supported and false if not.

CRRN2: The method returns true if the length to check is 0.

Parameters error

CRRP1: The method shall throw java.lang.NullPointerException if mask is null.

CRRP2: The method shall throw java.lang.ArrayIndexOutOfBoundsException if offset or length or both would cause access outside array bounds.

CRRP3: The method shall throw ME_PROFILE_NOT_AVAILABLE ToolkitException if Terminal Profile data are not available.

Context errors

No requirements

6.2.6.2.2 Test suite files

Specific triggering:

UNFORMATTED_SMS_PP_UPD

No Additional requirements for the GSM personalisation:

Test Script: API_2_MEP_CHEC_BSS_1.scr

Test Applet: API_2_MEP_CHEC_BSS_1.java

Load Script: ——API_2_MEP_CHEC_BSS_1.ldr (the applet is loaded

without INI after the reset (RST))

Cleanup Script: API_2_MEP_CHEC_BSS_1.clr

Parameter File: API_2_MEP_CHEC_BSS_1.par

6.2.6.2.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	No Terminal Profile is registered Triggered by unformatted SMS Mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	ME_PROFILE_NOT_AVAIL ABLE ToolkitException is thrown	<u>.</u>
2	NULL as parameter to check mask= NULL	NullPointerException is thrown	
3	Offset > mask.length mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	ArrayIndexOutOfBoundsExc eption is thrown	
4	Offset < 0 mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	ArrayIndexOutOfBoundsExc eption is thrown	
5	Length > mask.length mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	ArrayIndexOutOfBoundsExc eption is thrown	
6	Offset + length > mask.length Mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	ArrayIndexOutOfBoundsExc eption is thrown	
7	<pre>length = 0 mask = 0xfffffffffffffffffffffffffffffffffff</pre>	true is returned	
8	Check all the Terminal Profile mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	false is returned by the method because facility 15 is not supported	
9	Check a part of the Terminal Profile mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	true is returned by the method: the 16 first facilities except facility 15 have been successfully checked	
10	Check a part of the Terminal Profile mask = 0x0080 Offset = 0 Length = 2	false is returned by the method only facility 15 is checked and not supported.	

6.2.6.2.4 **Test Coverage**

CRR number	Test case number
N1	8,9,10
N2	7
P1	2
P2	3,4,5,6
P3	1

- 6.2.6.3 Method check (short index)

Test Area Reference: API 2 MEP CHECS

6.2.6.3.1 Conformance requirement:

The method with following header shall compliant to its definition in the API. public static boolean check(short index)
throws ToolkitException

Normal execution

CRRN1: The method checks a facility in the handset profile: returns true if the facility is supported, false if facility is not supported, or if facility-index outside MEProfile data.

Parameters error

No requirements

Context errors

CRRC1: The method shall throw ME_PROFILE_NOT_AVAILABLE ToolkitException if Terminal Profile data are not available

6.2.6.3.2 Test suite files

Specific triggering:

EVENT_STATUS_COMMAND

No Additional requirements for the GSM personalisation:

API 2 MEP CHECS 1.scr Test Script:

API_2_MEP_CHECS_1.java Test Applet:

Load Script: API 2 MEP CHECS 1.ldr

API 2 MEP CHECS 1.clr Cleanup Script:

Parameter File: API_2_MEP_CHECS_1.par

6.2.6.3.3 Test procedure

ld	<u>Description</u>	API Expectation	APDU Expectation
1	No Terminal Profile is registered	ME_PROFILE_NOT_AVAILABLE	
	Triggered by status command	ToolkitException is thrown	
	index = 1		
<u>2</u>	Terminal Profile, Facility is supported	true is returned by the method	
	index = 0		
3	Terminal Profile, Facility is not supported	false is returned by the method	
	index = 15		
4	Facility index is outside MEProfile data	false is returned by the method	
	index = 0x0099		

6.2.6.3.4 **Test Coverage**

CRR number Test case number	
<u>N1</u>	2,3,4
<u>C1</u>	<u>1</u>

6.2.6.4 Method getValue (short indexMSB, short indexLSB)

Test Area Reference: API 2 MEP GVALSS

Conformance requirement: 6.2.6.4.1

The method with following header shall compliant to its definition in the API. public static short getValue(short indexMSB, short indexLSB)

throws ToolkitException

Normal execution

CRRN1: The method returns the binary value of a parameter, delimited by two indexes, from the handset profile.

Parameters error

CRRP1: The method shall throw BAD_INPUT_PARAMETER ToolkitException if (indexMSB >= indexLSB +16) or (indexMSB < indexLSB) or (indexMSB < 0) or (indexLSB < 0).

Context errors

CRRC1: The method shall throw ME PROFILE NOT AVAILABLE ToolkitException if Terminal Profile data are not available.

6.2.6.4.2 Test suite files

Specific triggering:

EVENT STATUS COMMAND

No Additional requirements for the GSM personalisation:

Test Script: API_2_MEP_GVALSS_1.scr

Test Applet: API 2 MEP GVALSS 1.java

Load Script: API 2 MEP GVALSS 1.ldr

Cleanup Script: API_2_MEP_GVALSS_1.clr

Parameter File: API 2 MEP GVALSS 1.par

6.2.6.4.3 Test procedure

TP = FF 01 D2 F0 00 00 00 00 00 00 00 00 00 8D FF

ld	<u>Description</u>	API Expectation	APDU Expectation
1	No Terminal Profile is registered	ME PROFILE NOT AVAILABLE	
	Triggered by status command	ToolkitException is thrown	
	indexMSB = 15, indexLSB = 0		
<u>2</u>	Retreive number of character down ME display	13 is returned by the method	
	in Terminal Profile which is 13		
	indexMSB = 108, indexLSB = 104		
<u>3</u>	Retreive byte 3 and byte 4 from terminal	0xF0D2 is returned by the method	
	profile.		
	Byte $3 = 0xD2$, Byte $4 = 0xF0$		
	indexMSB = 31, indexLSB = 16		
<u>4</u>	indexMSB is negative	BAD_INPUT_PARAMETER	
	<pre>indexMSB = 0xFFFF, indexLSB = 0xFFFD</pre>	ToolkitException is thrown	
<u>5</u>	indexLSB is negative	BAD INPUT PARAMETER	
	indexMSB = 0x0002, indexLSB = 0xFFFD	ToolkitException is thrown	
<u>6</u>	indexMSB < indexLSB	BAD_INPUT_PARAMETER	
	indexMSB = 0x0002, indexLSB = 0x0003	ToolkitException is thrown	
7	indexMSB > indexLSB + 16	BAD INPUT PARAMETER	
	indexMSB = 0x0021, indexLSB = 0x0010	ToolkitException is thrown	

6.2.6.4.4 Test Coverage

CRR number	Test case number	
<u>N1</u>	<u>2,3</u>	
<u>P1</u>	4,5,6,7	
<u>C1</u>	1	

- 6.2.6.5 Method copy (short startOffset, byte[] dstBuffer, short dstOffset, short dstLength)

Test Area Reference: API_2_MEP_COPYS_BSS

6.2.6.5.1 Conformance requirement:

The method with following header shall compliant to its definition in the API.

public static short copy(short startOffset, byte[] dstBuffer, short dstOffset, short dstLength)

throws ToolkitException

Normal execution

CRRN1: The method copies a part of the handset profile in a buffer.

CRRN2: The method returns dstOffset + dstLength.

Parameters error

CRRP1: if dstBuffer is null NullPointerException is thrown.

<u>CRRP2</u>: If dstOffset or dstLength parameter is negative an

ArrayIndexOutOfBoundsException exception is thrown and no copy is performed

CRRP3: If dstOffset+dstLength is greater than dstBuffer.length, the length of the dstBuffer array an ArrayIndexOutOfBoundsException exception is thrown and no copy is performed

Context errors

<u>CRRC1: The method shall throw ME_PROFILE_NOT_AVAILABLE ToolkitException if</u> Terminal Profile data are not available.

6.2.6.5.2 Test suite files

Specific triggering:

EVENT_STATUS_COMMAND

No Additional requirements for the GSM personalisation:

Test Script:

API 2 MEP COPYS BSS 1.scr

Test Applet:

API 2 MEP COPYS BSS 1.java

Load Script:

API 2 MEP COPYS BSS 1.java

API 2 MEP COPYS BSS 1.ldr

Cleanup Script:

API 2 MEP COPYS BSS 1.ldr

API 2 MEP COPYS BSS 1.clr

Parameter File:

API 2 MEP COPYS BSS 1.par

6.2.6.5.3 Test procedure

TP = FF 01 D2 F0 01 02 00 00 00 00 00 00 00 8D FF

ld	<u>Description</u>	API Expectation	APDU Expectation
1	No Terminal Profile is registered	ME PROFILE NOT AVAILABLE	
	Triggered by status command	ToolkitException is thrown	
	<pre>startOffset = 0</pre>		
	dstBuffer.length = 6		
	dstOffset = 0		
2	dstLength = 6 dstBuffer is null	NullDaintarEvacation is thrown	
<u>2</u> 3		NullPointerException is thrown ArravIndexOutOfBoundsException	
<u> </u>	dstOffset ≥ dstBuffer.length startOffset = 0	is thrown	
	dstBuffer.length = 5	<u>is tillowii</u>	
	dstOffset = 5		
	dstLength = 1		
4	dstOffset < 0	ArrayIndexOutOfBoundsException	
_	startOffset = 0	is thrown	
	dstBuffer.length = 5	<u></u>	
	dstOffset = -1		
	dstLength = 1		
<u>5</u>	dstLength < 0	<u>ArrayIndexOutOfBoundsException</u>	
	startOffset = 0	<u>is thrown</u>	
	<pre>dstBuffer.length = 5 dstOffset = 1</pre>		
	dstLength = -1		
6	dstLength >dstBuffer.length	ArrayIndexOutOfBoundsException	
<u> </u>	startOffset = 0	is thrown	
	dstBuffer.length = 5	is tillowii	
	dstOffset = 0		
	dstLength = 6		
<u>7</u>	dstOffset + dstLength >dstBuffer.length	<u>ArrayIndexOutOfBoundsException</u>	
	<pre>startOffset = 0</pre>	<u>is thrown</u>	
	dstBuffer.length = 5		
	dstOffset = 3		
_	dstLength = 3	Decult of conv() is C	
<u>8</u>	Successful call extreme values startOffset = 0	Result of copy() is 6	
	dstBuffer.length = 6		
	dstOffset = 0		
	dstLength = 6		
9	Successful call any values	Result of copy() is 7	
	startOffset = 1		
	<pre>dstBuffer.length = 20</pre>		
	dstOffset = 3		
40	dstLength = 4	D 11 () : 00	
<u>10</u>	Successful call, copy with length =0	Result of copy() is 20	
	<pre>startOffset = 0 dstBuffer.length = 20</pre>		
	dstOffset = 20		
	dstLength = 0		
11	Value outside MEProfile data available	Result of copy() is 6	
1	startOffset = 13		
	dstBuffer.length = 6		
	dstOffset = 0		
	dstLength = 6		

6.2.6.5.4 Test Coverage

CRR number	Test case number	
<u>N1</u>	<u>8,9,10,11</u>	
<u>N3</u>	8,9,10,11	
<u>P1</u>	<u>2</u>	
<u>P2</u>	<u>4,5</u>	
<u>P3</u>	3,6,7	
<u>C1</u>	<u>1</u>	

6.2.7 Class ProactiveHandler

6.2.7.1 Method getTheHandler

Test Area Reference: API_2_PAH_GTHD
6.2.7.1.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public static ProactiveHandler getTheHandler()
throws ToolkitException

Normal execution

CRRN1: The method shall return the single system instance of the ProactiveHandler class.

CRRN2: The EnvelopeHandler is a Temporary JCRE Entry Point Object

Parameter errors

No requirements

Context errors

CRRC1: The method shall throw ToolkitException.HANDLER_NOT_AVAILABLE if the handler is busy.

6.2.7.1.2 Test Suite files

Test Script: API_2_PAH_GTHD_1.scr

Test Applet: API_2_PAH_GTHD_1.java

Load Script: API_2_PAH_GTHD_1.ldr

Cleanup Script: API_2_PAH_GTHD_1.clr

Parameter File: API 2 PAH GTHD 1.par

6.2.7.1.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	getTheHandler() twice	The returned objects shall be the	
		same	
2	getTheHandler()	The reference shall be a	
		ProactiveHandler	
3	getTheHandler()	The reference shall not be null	

6.2.7.1.4 Test Coverage

CRR number	Test case number
N1	1, 2, 3
N2	To be checked in
	Framework tests and
	insert here cross
	reference
C1	To be checked in
	Framework tests and
	insert here cross
	reference

6.2.7.2 Method init

Test Area Reference: API_2_PAH_INITBBB

6.2.7.2.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: The init() method initialises the next Proactive command in the ProactiveHandler, with Command details and Device Identities TLV. The source device is always the SIM Card (81h). The Comprehension Required flags are set.

CRRN2: The Command number may take any value between 01h and FEh.

CRRN3: The init() method clears the ProactiveHandler before initialising it.

CRRN4: No TLV is selected after a call to the method.

CRRN5: The handler is not sent to the mobile by the init() method.

Parameter errors

No requirements

Context errors

No requirements

6.2.7.2.2 Test Suite files

Test Script: API_2_PAH_INITBBB_1.scr

Test Applet: API_2_PAH_INITBBB_1.java

Load Script: API_2_PAH_INITBBB_1.ldr

Cleanup Script: API_2_PAH_INITBBB_1.clr

Parameter File: API_2_PAH_INITBBB_1.par

6.2.7.2.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call the init() method	•	•
	type = 01h		
	qualifier = 02h		
	dstDevice = 03h		
	Copy ProactiveHandler in a byte array		
	(source)		
	Compare the byte array	source and reference are	
	81h 03h xxh 01h 02h	identical	
	82h 02h 81h 03h		
	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		
2	Verify the command number value	01h-FEh	
	•		
3	Call the init() method		
	type = FFh		
	qualifier = FEh		
	destination = FDh		
	Copy ProactiveHandler in a byte array		
	(source)		
	Compare the byte array	source and reference are	
	81h 03h xxh FFh FEh	identical	
	82h 02h 81h FDh		
	· · · ·		
4	Select the 1st TLV in the handler		
	Call the init() method with any value		
	Call the getValueLength() method	UNAVAILABLE_ELEMENT	
		ToolkitException is thrown by	
		getValueLength()	

6.2.7.2.4 Test Coverage

CRR number	Test case number
N1	1, 3
N2	2
N3	3
N4	4
N5	1, 3

- 6.2.7.3 Method initDisplayText

Test Area Reference: API_2_PAH_INDTBB_BSS

6.2.7.3.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: The method shall build a DISPLAY TEXT proactive command in the ProactiveHandler, using qualifier, dcs and buffer parameters. Comprehension required flags are set.

CRRN2: A call to this method clears the handler then initialises it.

CRRN3: No TLV is selected after a call to the method.

CRRN4: The DISPLAY TEXT command is not sent by the method.

CRRN5: The Command Number may take any value between 01h and FEh.

Parameter errors

CRRP1: The method shall throw NullPointerException if buffer is null.

CRRP2: If offset or length or both would cause access outside array bounds, an ArrayIndexOutOfBoundsException shall be thrown.

Context errors

CRRC1: A ToolkitException.HANDLER_OVERFLOW shall be thrown if the ProactiveHandler is too small to put the requested data.

6.2.7.3.2 Test Suite files

Test Script: API_2_PAH_INDTBB_BSS_1.scr

Test Applet: API_2_PAH_INDTBB_BSS_1.java

Load Script: API_2_PAH_INDTBB_BSS_1.ldr

Cleanup Script: API_2_PAH_INDTBB_BSS_1.clr

Parameter File: API_2_PAH_INDTBB_BSS_1.par

6.2.7.3.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	NULL as parameter to buffer buffer = NULL	NullPointerException is thrown	
2	<pre>offset > buffer.length buffer = "Text" offset = 5 length = 0</pre>	ArrayIndexOutOfBoundsException is thrown	
3	<pre>offset < 0 buffer = "Text" offset = -1</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
4	<pre>length > buffer.length buffer = "Text" offset = 0 length = 5</pre>	ArrayIndexOutOfBoundsException is thrown	
5	<pre>offset + length > buffer.length buffer = "Text" offset = 3 length = 2</pre>	ArrayIndexOutOfBoundsException is thrown	
6	<pre>length < 0 buffer = "Text" offset = 3 length = -1</pre>	ArrayIndexOutOfBoundsException is thrown	
7	Successful call, buffer is the whole buffer qualifier = 0 dcs = 4 buffer = "TextA" offset = 0 length = 5	No exception is thrown	
	Verify the command number value	Command number between 01h and FEh	
8	Send the command		DISPLAY TEXT Proactive command qualifier = 00h dcs = 4

		1	Tm
9	Succesfull call, buffer is part of a buffer with		Text = "TextA" DISPLAY TEXT Proactive
9	the end part		command
	Send the command		Command
	qualifier = 0		qualifier = 00h
	dcs = 4		dcs = 4 Text = "TextB"
	<pre>buffer = "12TextB" offset = 2</pre>		lext = "lextB"
	length = 5		
10	Succesfull call, buffer is part of a buffer with		DISPLAY TEXT Proactive
	the first part		command
	Send the command		3.1.5.1
	qualifier = 0 dcs = 4		qualifier = 00h dcs = 4
	buffer = "TextC12"		Text = "TextC"
	offset = 0		
44	length = 5		DIODI AV TEVE Des estive
11	Succesfull call, buffer is part of a buffer Send the command		DISPLAY TEXT Proactive
	qualifier = 0		command
	dcs = 4		qualifier = 00h
	<pre>buffer = "12TextD34"</pre>		dcs = 4
	offset = 2 length = 5		Text = "TextD"
12	Succesfull call, qualifier = 81h		DISPLAY TEXT Proactive
	Send the command		command
	qualifier = 81h		
	<pre>dcs = 4 buffer = "TextE"</pre>		qualifier = 81h dcs = 4
	offset = 0		Text = "TextE"
	length = 5		10.102
13	Succesfull call, DCS=0 (7 bits)		DISPLAY TEXT Proactive
	Send the command		command
	<pre>qualifier = 0 dcs = 0</pre>		qualifier = 00h
	buffer = "TextF"		dcs = 0
	offset = 0		Text = "TextF"
	length = 5		DIODI AVI TEVE D
14	Succesfull call, DCS=8 (UCS2) Send the command		DISPLAY TEXT Proactive command
	qualifier = 0		Command
	dcs = 8		qualifier = 00h
	<pre>buffer = "TextG" offset = 0</pre>		dcs = 8 Text = "TextG"
	length = 5		lext = "lextG"
15	Call the initDisplayText() method with any		DISPLAY TEXT Proactive
_	value		command
	Then build and send a DISPLAY TEXT		7.1.5.1
	command		qualifier = 00h dcs = 4
	qualifier = 0 dcs = 4		Text = "TextHTextH"
	buffer = "TextHTextH"		
	offset = 0		
16	length = 10 Successful call, text length is null		DISPLAY TEXT Proactive
10	Send the command		command
	qualifier = 0		
	<pre>dcs = 4 buffer = "" (not null buffer)</pre>		qualifier = 00h
	offset = 0 (not null buffer)		Text String TLV = 8D 00
	length = 0		
17	Select a TLV in the ProactiveHandler	UNAVAILABLE_ELEMENT	
	Call the initDisplayText() method	ToolkitException is thrown by	
	Call the getValueLength() method	getValueLength()	
18	Successful call, buffer length = 7Eh		DISPLAY TEXT Proactive
			command
	qualifier = 0 dcs = 4		
	dcs = 4 buffer = "UUU"		Text String TLV = 8D 7F 04 55 55
	offset = 0		52 /1 51 55 55
	length = 7Eh		

19	Successful call, buffer length = 7Fh		DISPLAY TEXT Proactive
			command
	qualifier = 0		
	dcs = 4		Text String TLV = 8D 81
	buffer = "UUU"		80 04 55 55
	offset = 0		
	length = 7Fh		
20	Successful call, buffer length = 240		DISPLAY TEXT Proactive
			command
	Qualifier = 0		
	dcs = 4		Text String TLV =
	buffer = "UUU"		8D 81 F1 04 55 55
	offset = 0		
	length = 240		
21	Call the initDisplayText() method with a too	HANDLER_OVERFLOW	
	long buffer	ToolkitException is thrown	
	qualifier = 0		
	dcs = 4		
	buffer = "XXXX"		
	offset = 0		
	length = 241		
22	Call the initDisplayText() without sending the		No proactive command
	command		shall be sent expected
			status is '9000'

6.2.7.3.4 Test Coverage

CRR number	Test case number
N1	8, 9, 10, 11, 12, 13, 14,
	15, 16, 18, 19, 20
N2	15
N3	17
N4	22
N5	7
P1	1
P2	2, 3, 4, 5, 6
C1	21

6.2.7.4 Method initGetInkey

Test Area Reference: API_2_PAH_INGKBB_BSS

6.2.7.4.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: The method shall build a GET INKEY proactive command in the ProactiveHandler, using qualifier, dcs and buffer parameters. Comprehension Required flags are set.

CRRN2: A call to this method clears the handler then initialises it.

CRRN3: No TLV is selected after a call to the method.

CRRN4: The GET INKEY command is not sent by the method.

CRRN5: The Command Number may take any value between 01h and FEh.

Parameter errors

CRRP1: The method shall throw NullPointerException if buffer is null.

CRRP1: If offset or length or both would cause access outside array bounds, a ArrayIndexOutOfBoundsException shall be thrown.

Context errors

CRRC1: A ToolkitException.HANDLER_OVERFLOW shall be thrown if the ProactiveHandler is to small to put the requested data.

6.2.7.4.2 Test Suite files

Test Script: API_2_PAH_INGKBB_BSS_1.scr

Test Applet: API_2_PAH_INGKBB_BSS_1.java

Load Script: API_2_PAH_INGKBB_BSS_1.ldr

Cleanup Script: API_2_PAH_INGKBB_BSS_1.clr

Parameter File: API_2_PAH_INGKBB_BSS_1.par

6.2.7.4.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	NULL as parameter to buffer	NullPointerException is thrown	•
	buffer = NULL	•	
2	offset > buffer.length	ArrayIndexOutOfBoundsExceptio	
	buffer = "Text"	n is thrown	
_	offset = 5	A	
3	offset < 0	ArrayIndexOutOfBoundsExceptio	
	offset = -1	n is thrown	
4	length > buffer.length	ArrayIndexOutOfBoundsExceptio	
-	buffer = "Text"	n is thrown	
	offset = 0	II IS UII OWII	
	length = 5		
5	offset + length > buffer.length	ArrayIndexOutOfBoundsExceptio	
	buffer = "Text"	n is thrown	
	offset = 3		
6	length = 2 length < 0	A recorded as Auto Control of Control	
О	buffer = "Text"	ArrayIndexOutOfBoundsException is thrown	
	offset = 3	n is thrown	
	length = -1		
7	Successful call, buffer is the whole buffer	No exception is thrown	
	qualifier = 0		
	dcs = 4		
	<pre>buffer = "TextA" offset = 0</pre>		
	length = 5		
	Verify the command number value	Command number between 01h	
	Torny the command hamber value	and FEh	
8	Send the command		GET INKEY Proactive
			command
			qualifier = 00h
			dcs = 4
	Cuspectual cell buffer in part of a buffer with		Text = "TextA"
9	Succesfull call, buffer is part of a buffer with		GET INKEY Proactive
	the end part qualifier = 0		command
	dcs = 4		qualifier = 00h
	buffer = "12TextB"		dcs = 4
	offset = 2		Text = "TextB"
	length = 5		

Successful call, buffer is part of a buffer with the first part of the first part of command command control of case to command control of case to command c				
don = 4 buffer = "rextC12" de = 4 Text = "TextC12" de = 4 Text = "TextC12" de = 4 Text = "TextC12" de = 4 Text = 1 TextC12" de = 4	10			
buffer = ""extCt2"		-		0.03
Successful call, buffer is part of a buffer				_
Successful call, buffer is part of a buffer Send the command qualifier = 00h doe = 4 buffer = "12rextD34" GET INKEY Proactive command qualifier = 00h doe = 4 1				
gualifier = 0 dos = 4 buffer = "12TextD34" offaet = 2 length Successful call, qualifier = 81h dos = 4 buffer = "Text" Succesful call, qualifier = 81h dos = 4 buffer = "Text" Succesful call, Qualifier = 81h dos = 4 buffer = "Text" offaet = 0 length = 5 Succesful call, DCS=0 (7 bits) qualifier = 0 dos = 0 length = 5 Succesful call, DCS=8 (UCS2) qualifier = 0 dos = 0 length = 5 Call the initGetInkey() method with any value Then build and send a GET INKEY command qualifier = 0 o dos = 4 buffer = "TextBTextH" offaet = 0 length = 5 Call the initGetInkey() method with any value Then build and send a GET INKEY command qualifier = 0 o dos = 4 buffer = "TextBTextH" offaet = 0 length = 5 Call the initGetInkey() method with any value Then build and send a GET INKEY command qualifier = 0 o dos = 4 buffer = "TextBTextH" offaet = 0 length = 5 Successful call, text length is null Successful call,		-		
qualifier = 00 qualifier = 00h dcs = 4 Text = "TextD"	11			
dos = 4 buffer = '12TextD34' dos = 4 Text = 'TextD' 22 Successful call, qualifier = 81h command qualifier = 81h dos = 4 dos = 4 Text = 'TextD' 32 Successful call, DCS=0 (7 bits) qualifier = 81h dos = 4 dos = 4 dos = 4 dos = 0 dos = 8 dos = 0 dos = 0 dos = 8 dos = 0 dos = 0 dos = 8 dos = 0				command
buffer = "12TextD34" offset = 2 insight = 5 Successful call, qualifier = 81h qualifier = 81h dcs = 4 buffer = "rextE" offset = 0 length = 5 Succesful call, DCS=0 (7 bits) qualifier = 0 dcs = 0 length = 5 Succesful call, DCS=8 (UCS2) qualifier = 0 dcs = 0 length = 5 Call the initicetinkey() method with any value Then build and send a GET INKEY command qualifier = 00h dcs = 0 length = 5 Call the initicetinkey() method with any value Then build and send a GET INKEY command qualifier = 00 dcs = 4 buffer = "TextIF" offset = 0 length = 5 Call the initicetinkey() method with any value Then build and send a GET INKEY command qualifier = 00 dcs = 4 buffer = "TextIFTextIF" offset = 0 length = 10 length = 10 Successful call, text length is null Send the command qualifier = 00 dcs = 4 buffer = "" offset = 0 length = 0 Text string TLV = 8D 00 Text string TLV = 8D 81 80 04 55 55 GET INKEY Proactive command Qualifier = 0 dcs = 4 buffer = "" offset = 0 length = 7ph Successful call, buffer length = 7Fh qualifier = 0 dcs = 4 buffer = "" offset = 0 length = 7ph Successful call, buffer length = 7Fh qualifier = 0 dcs = 4 buffer = "" offset = 0 length = 7ph GET INKEY Proactive command Text string TLV = 8D 81 80 04 55 55 GET INKEY Proactive command Call the initicetinkey() method Call the pervalued call, buffer length = 240 Oualifier = 0 length = 7ph GET INKEY Proactive command Text string TLV = 8D 81 80 04 55 55 GET INKEY Proactive command Call the first = 0 length = 7ph GET INKEY Proactive command Text string TLV = 8D 81 80 04 55 55 GET INKEY Proactive command Text string TLV = 8D 81 80 04 55 55		-		qualifier = 00h
length = 5				-
Successful call, qualifier = 81h qualifier = 81h des = 4 forfast = 0 length = 5				Text = "TextD"
qualifier = 81h dcs = 4 buffer = 'TextE' offset = 0 length = 5 Succesful call, DCS=0 (7 bits) qualifier = 0 dcs = 0 buffer = 'TextF' offset = 0 length = 5 Succesful call, DCS=8 (UCS2) qualifier = 0 dcs = 8 buffer = 'TextF' offset = 0 length = 5 Call the initGetInkey() method with any value Then build and send a GET INKEY command qualifier = 00h dcs = 8 rext = "TextG' offset = 0 length = 5 Call the initGetInkey() method with any value Then build and send a GET INKEY command qualifier = 00h dcs = 8 rext = "TextG' offset = 0 length = 10 Call the initGetInkey() method with any value Then build and send a GET INKEY command qualifier = 00h dcs = 4 buffer = 'TextFextHextH' offset = 0 length = 10 Successful call, text length is null Send the command qualifier = 00h dcs = 4 buffer = '' offset = 0 length = 10 Select a TLV in the ProactiveHandler Call the initGetInkey() method Call the petValueLength() method Call the initGetInkey() method Call the in	40	-		OFT INIVENA Doz tir -
dos = 4 Duffer = "TextE" GET INKEY Proactive command qualifier = 00 dos = 0	12			
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Then build and send a GET INKEY command qualifier = 0 the des = 4 buffer = "TextHTextH" offset = 0 length = 10 16 Successful call, text length is null send the command qualifier = 0 the des = 4 the description of the command qualifier = 0 the de	4.5	Call the init Catholica () mathed with any value		CET INICEY Dragative
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length = 0				-
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offset = 0 length = 7Fh 20 Successful call, buffer length = 240 Qualifier = 0 dcs = 4 Qualifier = 0 Text String TLV =				
20 Successful call, buffer length = 240 Qualifier = 0 dcs = 4 GET INKEY Proactive command Text String TLV =		offset = 0		00 01 00 00
Qualifier = 0 dcs = 4 command Text String TLV =				
Qualifier = 0 dcs = 4 Text String TLV =	20	Successful call, buffer length = 240		
dcs = 4 Text String TLV =		Qualifier = 0		command
buffer = "UUU" 8D 81 F1 04 55 55		dcs = 4		
		buffer = "UUU"		8D 81 F1 04 55 55

	offset = 0		
	length = 240		
21	Call the initGetInkey() method with a too long	HANDLER_OVERFLOW	
	buffer	ToolkitException is thrown	
	qualifier = 0	·	
	dcs = 4		
	buffer = "XXXX"		
	offset = 0		
	length = 241		
22	Call the initGetInkey() without sending the		No proactive command
	command		shall be sent expected
			status is '9000'

6.2.7.4.4 Test Coverage

CRR number	Test case number
N1	8, 9, 10, 11, 12, 13, 14,
	15, 16, 18, 19, 20
N2	15
N3	17
N4	22
N5	7
P1	1
P2	2, 3, 4, 5, 6
C1	21

6.2.7.5 Method initGetInput

Test Area Reference: API_2_PAH_INGPBB_BSSSS

6.2.7.5.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: The method shall build a GET INPUT proactive command in the ProactiveHandler, using qualifier, dcs, buffer, minRespLength and maxRespLength parameters. Comprehension Required flags are set.

CRRN2: A call to this method clears the handler then initialises it.

CRRN3: No TLV is selected after a call to the method.

CRRN4: The GET INPUT command is not sent by the method.

CRRN5: The Command Number may take any value between 01h and FEh.

Parameter errors

CRRP1: The method shall throw NullPointerException if buffer is null.

CRRP2: If offset or length or both would cause access outside array bounds, a ArrayIndexOutOfBoundsException shall be thrown.

Context errors

CRRC1: A ToolkitException.HANDLER_OVERFLOW shall be thrown if the ProactiveHandler is to small to put the requested data.

6.2.7.5.2 Test Suite files

Test Script: API_2_PAH_INGPBB_BSSSS_1.scr

Test Applet: API_2_PAH_INGPBB_BSSSS_1.java

Load Script: API_2_PAH_INGPBB_BSSSS_1.ldr

Cleanup Script: API_2_PAH_INGPBB_BSSSS_1.clr

Parameter File: API_2_PAH_INGPBB_BSSSS_1.par

6.2.7.5.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	NULL as parameter to buffer	NullPointerException is thrown	Ai Do Expectation
'	buffer = NULL	Trum officerException is thown	
2	offset > buffer.length	ArrayIndexOutOfBoundsExceptio	
	buffer = "Text"	n is thrown	
	offset = 5		
3	offset < 0	ArrayIndexOutOfBoundsExceptio	
	buffer = "Text"	n is thrown	
4	offset = -1 length > buffer.length	ArrayIndexOutOfBoundsExceptio	
4	buffer = "Text"	n is thrown	
	offset = 0	II is unown	
	length = 5		
5	offset + length > buffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>buffer = "Text"</pre>	n is thrown	
	offset = 3		
6	length = 2	A recorded as Out Of Douglas Type at in	
О	<pre>length < 0 buffer = "Text"</pre>	ArrayIndexOutOfBoundsException is thrown	
	offset = 3	n is thrown	
	length = -1		
7	Successful call, buffer is the whole buffer	No exception is thrown	
	-1		
	qualifier = 0 dcs = 4		
	dcs = 4 buffer = "TextA"		
	offset = 0		
	length = 5		
	minRespLength = 00h		
	maxRespLength = FFh		
	Verify the command number value	Command number between 01h	
		and -FEh	
8	Send the command		GET INPUT Proactive
			command
			qualifier = 00h
			dcs = 4
			Text = "TextA"
			Min Length = 00h
			Max Length = FFh
9	Succesfull call, buffer is part of a buffer with		GET INPUT Proactive
	the end part		command
	Send the command		mualifier - 00h
	qualifier = 0 dcs = 4		qualifier = 00h dcs = 4
	dcs = 4 buffer = "12TextB"		Text = "TextB"
	offset = 2		Min Length = 10h
	length = 5		Max Length = FFh
	minRespLength = 10h		
	maxRespLength = FFh		
10	Succesfull call, buffer is part of a buffer with		GET INPUT Proactive

	the first part		command
	Send the command		qualifier = 00h
	qualifier = 0 dcs = 4		dcs = 4
	buffer = "TextC12"		Text = "TextC"
	offset = 0		Min Length = FFh
	<pre>length = 5 minRespLength = FFh</pre>		Max Length = FFh
	maxRespLength = FFh		
11	Succesfull call, buffer is part of a buffer		GET INPUT Proactive
	Send the command		command
	qualifier = 0		
	dcs = 4 buffer = "12TextD34"		qualifier = 00h dcs = 4
	offset = 2		Text = "TextD"
	length = 5		Min Length = 00h
	minRespLength = 00h		Max Length = 00h
12	maxRespLength = 00h Succesfull call, qualifier = 81h		GET INPUT Proactive
12	qualifier = 81h		command
	dcs = 4		Command
	buffer = "TextE"		qualifier = 81h
	offset = 0 length = 5		dcs = 4 Text = "TextE"
	minRespLength = 00h		Min Length = 00h
	maxRespLength = 10h		Max Length = 10h
13	Succesfull call, DCS=0 (7 bits)		GET INPUT Proactive
	qualifier = 0 dcs = 0		command
	buffer = "TextF"		qualifier = 00h
	offset = 0		dcs = 0
	<pre>length = 5 minRespLength = 10h</pre>		Text = "TextF"
	maxRespLength = 10h		Min Length = 10h Max Length = 10h
			Fida Bengen - 1011
14	Succesfull call, DCS=8 (UCS2)		GET INPUT Proactive
	qualifier = 0 dcs = 8		command
	buffer = "TextG"		qualifier = 00h
	offset = 0		dcs = 8
	length = 5		Text = "TextG"
	minRespLength = 00h maxRespLength = FFh		Min Length = 00h Max Length = FFh
			Max Bengen - FFII
15	Call the initGetInput() method with any value		GET INPUT Proactive
	Then build and send a GET INPUT command		command
	qualifier = 0 dcs = 4		qualifier = 00h
	dcs = 4 buffer = "TextHTextH"		dcs = 4
	offset = 0		Text = "TextHTextH"
	length = 10		Min Length = 00h
	minRespLength = 00h maxRespLength = 10h		Max Length = 10h
16	Successful call, text length is null		GET INPUT Proactive
	Send the command		command
	qualifier = 0 dcs = 4		qualifier = 00h
	buffer = ""		Text String TLV = 8D 00
	offset = 0		Min Length = 00h
	length = 0		Max Length = 10h
	minRespLength = 00h maxRespLength = 10h		
17	Select a TLV in the ProactiveHandler	UNAVAILABLE_ELEMENT	
	Call the initGetInput() method	ToolkitException is thrown by	
	Call the getValueLength() method	getValueLength()	
18	Successful call, buffer length = 7Eh		GET INPUT Proactive
18	Successiui cali, buller length = 7En		command
	qualifier = 0		Communa
	dcs = 4		Text String TLV =
	<pre>buffer = "UUU" offset = 0</pre>		8D 7F 04 55 55
	011200 - 0	1	Min Length = 00h

	length = 7Eh		Max Length = 10h
	minRespLength = 00h		_
	maxRespLength = 10h		
19	Successful call, buffer length = 7Fh		GET INPUT Proactive
	,		command
	qualifier = 0		
	dcs = 4		Text String TLV = 8D 81
	buffer = "UUU"		80 04 55 55
	offset = 0		Min Length = 00h
	length = 7Fh		Max Length = 10h
	minRespLength = 00h		
	maxRespLength = 10h		
20	Successful call, buffer length = 236		GET INPUT Proactive
			command
	Qualifier = 0		
	dcs = 4		Text String TLV =
	buffer = "UUU"		8D 81 ED 04 55 55
	offset = 0		
	length = 236		
	minRespLength = 00h		
04	maxRespLength = 10h	LIANDIED OVEDELOW	
21	Call the initGetInput() method with a too long	HANDLER_OVERFLOW	
	buffer	ToolkitException is thrown	
	qualifier = 0		
	dcs = 4 buffer = "XXXX"		
	offset = 0		
	length = 237		
	minRespLength = 00h		
	maxRespLength = 10h		
22	Call the initGetInput() without sending the		No proactive command
	command		shall be sent expected
	Command		status is '9000'
			Status is 3000

6.2.7.5.4 Test Coverage

CRR number	Test case number	
N1	8, 9, 10, 11, 12, 13, 14,	
	15, 16, 18, 19, 20	
N2	15	
N3	17	
N4	22	
N5	7	
P1	1	
P2	2, 3, 4, 5, 6	
C1	21	

- 6.2.7.6 Method send

Test Area Reference: API_2_PAH_SEND

6.2.7.6.1 Conformance requirement

The method with following header shall be compliant to its definition in the API. public byte send()

Normal execution

CRRN1: The send() method send the current proactive command to the mobile.

CRRN2: The returned byte is equal to general result of the command (first byte of Result TLV in Terminal Response).

CRRN3: The handler remains unchanged after a call to send() method until the use of initXX() or appendTLV().

CRRN4: There is no invocation of select() or deselect() method.

CRRN5: A pending toolkit applet transaction at the method invocation is aborted.

Parameter errors

No requirements

Context errors

CRRC1: A ToolkitException.UNAVAILABLE_ELEMENT shall be thrown is the Result Simple TLV is missing in Terminal Response.

CRRC2: A ToolkitException.OUT_OF_TLV_BOUNDARIES shall be thrown if the general result byte is missing in the Result Simple TLV in Terminal Response.

6.2.7.6.2 Test Suite files

Test Script: API_2_PAH_SEND_1.scr

Test Applet: API_2_PAH_SEND_1.java

Load Script: API_2_PAH_SEND_1.ldr

Cleanup Script: API_2_PAH_SEND_1.clr

Parameter File: API_2_PAH_SEND_1.par

6.2.7.6.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
	qualifier = 00h		command
	dcs = 04h		
	buffer = 'Text'		
2	Terminal Response with General Result = 00	Result of send() is 00h	
	Result TLV = 03 01 00 (command performed		
	successfully)		
3	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
	qualifier = 00h		command
	dcs = 04h		
—	buffer = 'Text'	D 11 (10 : 041	
4	Terminal Response with General Result = 01,	Result of send() is 01h	
	without Additional information on result		
	D		
	Result TLV = 03 01 01 (command performed with partial comprehension)		
5	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
٦	qualifier = 00h		command
	dcs = 04h		Command
	buffer = 'Text'		
6	Terminal Response with General Result = 01,	Result of send() is 01h	
	with Additional information on result	Treating of Contact to Contact	
	Result TLV = 03 02 01 55 (command		
	performed with partial comprehension)		
7	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
	qualifier = 00h		command
	dcs = 04h		
	buffer = 'Text'		
8	Terminal Response with General Result = 02	Result of send() is 02h	
	Result TLV = 03 04 02 65 43 21 (Missing		
<u> </u>	information)		DIODI AV TEVT Days (
9	Build and send a 7Fh byte command		DISPLAY TEXT Proactive
	(DISPLAY TEXT)		command
	qualifier = 00h		DED ELT - DO 7E
	dcs = 04h		BER-TLV = D0 7F

	buffer = "UUUUU"		Text String TLV = 8D 74
	length = 73h		04 55 55 55
10	Build and send a 80h byte command		DISPLAY TEXT Proactive
	(DISPLAY TEXT)		command
	qualifier = 00h		DDD DIV DO 01 00
	dcs = 04h buffer = "UUUUU"		BER-TLV = D0 81 80 Text String TLV = 8D 75
	length = 74h		04 55 55 55
11	Build and send a maximum length command		DISPLAY TEXT Proactive
	(length of the handler should be 253)		command
	, ,		
	DISPLAY TEXT:		BER-TLV = D0 81 FD
	Qualifier = 0 dcs = 4		Text String TLV = 8D 81 F1 04 55 55
	buffer = "UUU"		11 04 33 33
	offset = 0		
	length = 240		
12	Verify that the Proactive Handler is not		
	modified after a send() Build a DISPLAY TEXT command		
	Build a DISPLAT TEXT Collilland		
	Copy ProactiveHandler to source byte array		
	copy i readiliteriariansi to occirco byto array		
	Send command		
	Copy ProactiveHandler to destination byte		
	array		
	Compare source and destination	Source and destination are	
	Compare source and destination	identical	
13	Build and send a DISPLAY TEXT command	Identical	DISPLAY TEXT Proactive
. •	Verify there is no invocation of select() or		command
	deselect() method.		
14	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
			command
	Terminal Response with 2 Result TLV	Result of send() is 02h	
	1st Result TLV = 03 02 02 12		
	2nd Result TLV = 03 03 03 34 56		
15	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
			command
	- I I I I I I I I I I I I I I I I I I I		
	Terminal Response without Result Simple	ToolkitException.UNAVAILABLE	
	TLV	_ELEMENT is thrown by send()	
16	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
10	Build and Send a Dior LAT TEXT Confilland		command
	Terminal Response without general result	ToolkitException.OUT_OF_TLV_	
	byte in the Simple TLV	BOUNDARIES is thrown by	
		send()	
	Result TLV = 03 00		

6.2.7.6.4 Test Coverage

CRR number	Test case number	
N1	1, 3, 5, 7, 9, 10, 11, 12,	
	13, 14	
N2	2, 4, 6, 8, 14	
N3	12	
N4	13	
N5	To be checked in	
	Framework tests and	
	insert here cross	
	reference	
C1	15	
C2	16	

- 6.2.7.7 Method getLength

Test Area Reference API_2_PAH_GLEN

6.2.7.7.1 Conformance requirement

The method with following header shall be compliant to its definition in the API. public short getLength()

throws ToolkitException

Normal execution

CRRN1: returns the length in bytes of the TLV list.

Parameter errors

No requirements

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException.HANDLER_NOT_AVAILABLE.

6.2.7.7.2 Test Suite files

Test Script: API_2_PAH_GLEN_1.scr

Test Applet: API_2_PAH_GLEN_1.java

Load Script: API_2_PAH_GLEN_1.ldr

Cleanup Script: API_2_PAH_GLEN_1.clr

Parameter File: API 2 PAH GLEN 1.par

6.2.7.7.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Clear the handler getLength()	Result of getLength() is 0	
2	Call the init() method getLength()	Result of getLength() is 9	
3	Call the initDisplayText() method, with buffer length = 240 getLength()	Result of getLength() is 253	
4	Build a 7Fh Proactive Handler getLength()	Result of getLength() is 7Fh	
5	Build a 80h Proactive Handler getLength()	Result of getLength() is 80h	

6.2.7.7.4 Test Coverage

CRR number Test case number	
N1 1, 2, 3, 4,5	
C1	Does not apply for
	Proactive Handler

6.2.7.8 Method copy

Test Area Reference API_2_PAH_COPY_BSS

6.2.7.8.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: copies the simple TLV list contained in the handler to the destination byte array.

CRRN2: returns dstOffset + dstLength.

Parameter errors

CRRP1: if dstBuffer is null a NullPointerException is thrown.

CRRP2: if dstOffset or dstLength or both would cause access outside array bounds, or if dstLength is negative, an ArrayIndexOutOfBoundsException is thrown.

CRRP3: if dstLength is grater than the length of the simple TLV List, an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException. OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.7.8.2 Test Suite files

Test Script: API_2_PAH_COPY_BSS_1.scr

Test Applet: API_2_PAH_-COPY_BSS_1.java

Load Script: API_2_PAH_-COPY_BSS_1.ldr

Cleanup Script: API_2_PAH_-COPY_BSS_1.clr

Parameter File: API 2 PAH COPY BSS 1.par

6.2.7.8.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	NULL as parameter to dstBuffer	NullPointerException is thrown	•
2	Call the init() method		
	DstOffset > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	<pre>dstOffset = 6 dstLength = 0</pre>		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = -1	II IS UIIOWII	
	dstLength = 1		
4	DstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 0		
	dstLength = 6	A do do 0 40 fp do 5 45	
5	<pre>dstOffset + dstLength > dstBuffer.length dstBuffer.length = 5</pre>	ArrayIndexOutOfBoundsExceptio	
	dstOffset = 3	n is thrown	
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 0	11.10 11.10 11.11	
	dstLength = -1		
7	dstLength > length of the simple TLV list	ToolkitException.OUT_OF_TLV_	
	dstBuffer.length = 10	BOUNDARIES is thrown	
	dstOffset = 0		
8	dstLength = 10 Successful call, dstBuffer is the whole buffer	Result of copy() is 9	
٥	dstBuffer.length = 9	Result of copy() is 9	
	dstOffset = 0		
	dstLength = 9		
9	Compare the buffer	Result of arrayCompare() is 0	
10	Successful call, dstBuffer is part of a buffer	Result of copy() is 12	
	dstBuffer.length = 15	·	
	dstOffset = 3		
4.4	dstLength = 9	D 1: 1 0 0: 0	
11	Compare the whole buffer	Result of arrayCompare() is 0	
12	Successful call, dstBuffer is part of a buffer dstBuffer.length = 15	Result of copy() is 9	
	dstOffset = 3		
	dstLength = 6		
13	Compare the whole buffer	Result of arrayCompare() is 0	
	,		

6.2.7.8.4 Test Coverage

CRR number	Test case number
N1	9, 11, 13
N2	8, 10, 12
P1	1
P2	2, 3, 4, 5, 6
P3	7
C1	Does not apply for
	ProactiveHandler

6.2.7.9 Method findTLV

Test Area Reference API_2_PAH_FINDBB

6.2.7.9.1 Conformance requirement

The method with following header shall be compliant to its definition in the API. public byte findTLV(byte tag, byte occurrence)

throws ToolkitException

Normal execution

Looks for the indicated occurrence of a TLV element from the beginning of the TLV list (handler buffer):

CRRN1: the method is successful if the required occurrence exists then the corresponding TLV becomes current.

CRRN2: if the method is successful then it returns TLV_FOUND_CR_SET when Comprehension Required flag is set.

CRRN3: if the method is successful then it returns TLV_FOUND_CR_NOT_SET when Comprehension Required flag is not set.

CRRN4: if the required occurrence of the TLV element does not exist, the current TLV is no longer defined and TLV_NOT_FOUND is returned.

CRRN5: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if an input parameter is not valid (e.g. occurrence = 0) an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException BAD_INPUT_PARAMETER.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.7.9.2 Test Suite files

Test Script: API_2_PAH_FINDBB_1.scr

Test Applet: API_2_PAH_FINDBB_1.java

Load Script: API_2_PAH_FINDBB_1.ldr

Cleanup Script: API_2_PAH_FINDBB_1.clr

Parameter File: API_2_PAH_FINDBB_1.par

6.2.7.9.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialise the handler	-	-
	Invalid input parameter	ToolkitException.BAD_INPUT_P	
	Occurrence = 0	ARAMETER is thrown	
2	Call the init() method		
	Search 1st TLV	Result is TLV_FOUND_CR_SET	
	Tag = 01h		
	Occurrence = 1	D 4: 001	
3	Call the getValueLength() method	Result is 03h	
4	Search 2nd TLV	Result is TLV_FOUND_CR_SET	
	Tag = 02h Occurrence = 1		
5	Call the getValueLength() method	Result is 02h	
6	Select a TLV (tag 02h)	INESUIT IS UZII	
	Search a wrong tag	Result is TLV_NOT_FOUND	
	Tag = 03h	Result is TEV_NOT_TOOND	
	Occurrence = 1		
7	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown.	
8	Search a tag with wrong occurrence	Result is TLV_NOT_FOUND	
	Tag = 01h		
	Occurrence = 2		
9	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown.	
10	Append a TLV with tag=02h		
	Search the TLV	Result is	
	Tag = 02h Occurrence = 2	TLV_FOUND_CR_NOT_SET	
11	Append a TLV with tag=04h		
- ' '	Search the TLV	Result is	
	Tag = 04h	TLV_FOUND_CR_NOT_SET	
	Occurrence = 1	12V_1 0014B_0K_1401_021	
12	Search tag 81h	Result is TLV_FOUND_CR_SET	
	Tag = 81h		
	Occurrence = 1		
13	Search tag 84h	Result is	
	Tag = 84h	TLV_FOUND_CR_NOT_SET	
	Occurrence = 1		

6.2.7.9.4 Test Coverage

CRR number	Test case number
N1	3, 5
N2	2, 4
N3	10, 11
N4	6, 7,8, 9
N5	12, 13
P1	1
C1	Does not apply for
	Proactive Handler

- 6.2.7.10 Method getValueLength

Test Area Reference API_2_PAH_GVLE

6.2.7.10.1 Conformance requirement

The method with following header shall be compliant to its definition in the API. public short getValueLength()

throws ToolkitException

Normal execution

CRRN1: gets and returns the binary length of the value field for the last TLV element which has been found in the handler.

Parameter errors

No requirements

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.7.10.2 Test Suite files

Test Script: API_2_PAH_GVLE_1.scr

Test Applet: API_2_PAH_GVLE_1.java

Load Script: API_2_PAH_GVLE_1.ldr

Cleanup Script: API_2_PAH_GVLE_1.clr

Parameter File: API_2_PAH_GVLE_1.par

6.2.7.10.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call the init() method		-
	getValueLength()	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown	
2	Call the appendTLV() method		
	tag = 0D		
	<pre>valueOffset = 0</pre>		
	valueLength = 0		
	Search TLV 0Dh (Text String TLV)		
	<pre>getValueLength()</pre>	Result is 00h	
3	Call the initDisplayText() method		
	length = 1 (+ dcs byte)		
	Search TLV 0Dh (Text String TLV)		
	<pre>getValueLength()</pre>	Result is 02h	
4	Call the initDisplayText() method		
	length = 7Eh (+ dcs byte)		
	Search TLV 0Dh (Text String TLV)		
	getValueLength()	Result is 7Fh	
5	Call the initDisplayText() method		
	length = 7Fh (+ dcs byte)		
	Search TLV 0Dh (Text String TLV)		
	<pre>getValueLength()</pre>	Result is 80h	
6	Call the initDisplayText() method		
	length = F0h (maximum text length)		
	Search TLV 0Dh (Text String TLV)		
	getValueLength()	Result is F1h	

6.2.7.10.4 Test Coverage

CRR number	Test case number
N1	2, 3, 4, 5, 6
C1	Does not apply for
	Proactive Handler
C2	1

- 6.2.7.11 Method getValueByte

Test Area Reference API_2_PAH_GVBYS

6.2.7.11.1 Conformance requirement

The method with following header shall be compliant to its definition in the API. public byte getValueByte(short valueOffset)
throws ToolkitException

Normal execution

CRRN1: Gets a byte from the last TLV element which has been found in the handler and returns its value (1 byte).

Parameter errors

CRRP1: if valueOffset is out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.7.11.2 Test Suite files

Test Script: API_2_PAH_GVBYS_1.scr
Test Applet: API_2_PAH_GVBYS_1.java
Load Script: API_2_PAH_GVBYS_1.ldr
Cleanup Script: API_2_PAH_GVBYS_1.clr

Parameter File: API 2 PAH GVBYS 1.par

6.2.7.11.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call the init() method		-
	type = FFh		
	qualifier = FEh destination = FDh		
	getValueByte(0)	Toolkite veention UNIAVAII ADI E	
	get value byte(0)	ToolkitException.UNAVAILABLE ELEMENT is thrown	
2	Search TLV 01h (Command Details TLV)	ELEMENT IS UNOWN	
		ToolkitEveention OUT OF TIV	
	getValueByte(3)	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
3	Search TLV 01h (Command Details TLV)	BOUNDARIES IS INIOWN	
3	getValueByte(2)	Deput is FFh (qualifier)	
	gervaluebyte(2)	Result is FEh (qualifier)	
4	Search TLV 02h (Device Identities TLV)		
-	getValueByte(0)	Result is 81h (Source)	
	3	(2000)	
5	initDisplayText()		
	buffer = 00 01 7D		
	length = 7Eh		
	Search TLV 0Dh (Text String TLV)		
	getValueByte(7E)	Result is 7Dh	
6	initDisplayText()		
	buffer = 00 01 7D 7E		
	length = 7Fh		
	Search TLV 0Dh (Text String TLV)		
	getValueByte(7E)	Result is 7Dh	
7	getValueByte(7F)	Result is 7Eh	
	3 ,,		
8	initDisplayText()		
	buffer = 00 01 EF		
	length = F0h		
	Search TLV 0Dh (Text String TLV)	Describin FFI	
	getValueByte(F0)	Result is EFh	

6.2.7.11.4 Test Coverage

CRR number	Test case number
N1	3, 4, 5, 6, 7, 8
P1	2
C1	Does not apply for
	Proactive Handler
C2	1

- 6.2.7.12 Method copyValue

Test Area Reference API_2_PAH_CPYVS_BSS

6.2.7.12.1 Conformance requirement

The method with following header shall be compliant with its definition in the API.

Normal execution

CRRN1: copies a part of the last TLV element which has been found, into a destination. buffer.

CRRN2: returns dstOffset + dstLength.

Parameter errors

CRRP1: if dstBuffer is null NullPointerException is thrown.

CRRP2: if dstOffset or dstLength or both would cause access outside array bounds, or if dstLength is negative ArrayIndexOutOfBoundsException is thrown.

CRRP3: if valueOffset, dstLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.7.12.2 Test Suite files

Test Script: API_2_PAH_CPYVS_BSS_1.scr

Test Applet: API_2_PAH_CPYVS_BSS_1.java

Load Script: API_2_PAH_CPYVS_BSS_1.ldr

Cleanup Script: API_2_PAH_CPYVS_BSS_1.clr

Parameter File: API_2_PAH_CPYVS_BSS_1.par

6.2.7.12.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialise the handler	•	•
	Select a TLV		
	copyValue() with a null dstBuffer	NullPointerException is thrown	
2	initDisplayText() with length = 15		
	Select Text String TLV	A 1 1 0 (0/D 1 5);	
	dstOffset > dstBuffer.length dstBuffer.length = 5	ArrayIndexOutOfBoundsExceptio	
	dstOffset = 6	n is thrown	
	dstLength = 0		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = -1		
	dstLength = 1		
4	dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>dstBuffer.length = 5 dstOffset = 0</pre>	n is thrown	
	dstOffset = 0 dstLength = 6		
5	dstOffset + dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 3	II IS UIIOWII	
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 0		
	dstLength = -1		
7	initDisplayText() with length = 5		
	Select Text String TLV		
	valueOffset > Text String Length	ToolkitException.OUT_OF_TLV_	

	valueOffset = 7	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 0		
8	[Select Text String TLV]	ToolkitException.OUT_OF_TLV_	
	valueOffset < 0	BOUNDARIES is thrown	
	valueOffset = -1		
	dstBuffer.length = 15		
	dstOffset = 0		
_	dstLength = 1	TII-itti OUT OF TIV	
9	[Select Text String TLV]	ToolkitException.OUT_OF_TLV_	
	dstLength > Text String length	BOUNDARIES is thrown	
	valueOffset = 0		
	<pre>dstBuffer.length = 15 dstOffset = 0</pre>		
	dstLength = 7		
10	[Select Text String TLV]	ToolkitException.OUT_OF_TLV_	
10	valueOffset + dstLength > Text String	BOUNDARIES is thrown	
	length	POOMPAKIES IS IIIIOMII	
	valueOffset = 2		
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 5		
11	Initialise the handler		
	copyValue()	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown	
12	initDisplayText()	_ELEMENT is thrown	
12	dcs = 4	_ELEMENT is thrown	
12	dcs = 4 buffer = 00 01 0F	_ELEMENT is thrown	
12	dcs = 4 buffer = 00 01 0F Select Text String TLV		
12	dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call	_ELEMENT is thrown Result of copyValue() is 17	
12	dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0		
12	<pre>dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17</pre>		
12	<pre>dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0</pre>		
	<pre>dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17</pre>	Result of copyValue() is 17	
12	<pre>dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer</pre>		
	<pre>dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17</pre>	Result of copyValue() is 17	
13	<pre>dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F</pre>	Result of copyValue() is 17	
	dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F initialise dstBuffer	Result of copyValue() is 17	
13	dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F initialise dstBuffer dstBuffer = 55 55 55	Result of copyValue() is 17 Result is 00h	
13	dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F initialise dstBuffer dstBuffer = 55 55 55 Successful call	Result of copyValue() is 17	
13	dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F initialise dstBuffer dstBuffer = 55 55 55 Successful call valueOffset = 2	Result of copyValue() is 17 Result is 00h	
13	dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F initialise dstBuffer dstBuffer = 55 55 55 Successful call valueOffset = 2 dstBuffer.length = 20	Result of copyValue() is 17 Result is 00h	
13	dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F initialise dstBuffer dstBuffer = 55 55 55 Successful call valueOffset = 2 dstBuffer.length = 20 dstOffset = 3	Result of copyValue() is 17 Result is 00h	
13	<pre>dcs = 4 buffer = 00 01 0F Select Text String TLV</pre>	Result of copyValue() is 17 Result is 00h Result of copyValue() is 15	
13	dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F initialise dstBuffer dstBuffer = 55 55 55 Successful call valueOffset = 2 dstBuffer.length = 20 dstOffset = 3 dstLength = 12 Compare buffer	Result of copyValue() is 17 Result is 00h	
13	dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F initialise dstBuffer dstBuffer = 55 55 55 Successful call valueOffset = 2 dstBuffer.length = 20 dstOffset = 3 dstLength = 12 Compare buffer buffer =	Result of copyValue() is 17 Result is 00h Result of copyValue() is 15	
13	dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F initialise dstBuffer dstBuffer = 55 55 55 Successful call valueOffset = 2 dstBuffer.length = 20 dstOffset = 3 dstLength = 12 Compare buffer	Result of copyValue() is 17 Result is 00h Result of copyValue() is 15	
13	dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F initialise dstBuffer dstBuffer = 55 55 55 Successful call valueOffset = 2 dstBuffer.length = 20 dstOffset = 3 dstLength = 12 Compare buffer buffer = 55 55 55 50 1 02	Result of copyValue() is 17 Result is 00h Result of copyValue() is 15	
13	dcs = 4 buffer = 00 01 0F Select Text String TLV Successful call valueOffset = 0 dstBuffer.length = 17 dstOffset = 0 dstLength = 17 Compare buffer buffer = 04 00 01 0F initialise dstBuffer dstBuffer = 55 55 55 Successful call valueOffset = 2 dstBuffer.length = 20 dstOffset = 3 dstLength = 12 Compare buffer buffer = 55 55 55 01 02 03 04 05 06 07	Result of copyValue() is 17 Result is 00h Result of copyValue() is 15	

6.2.7.12.4 Test Coverage

CRR number	Test case number
N1	13, 15
N2	12, 14
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
C1	Does not apply for
	Proactive Handler
C2	11

- 6.2.7.13 Method compareValue

Test Area Reference API_2_PAH_CPRVS_BSS

6.2.7.13.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

Compares the last found TLV element with a buffer:

CRRN1: returns 0 if identical.

CRRN2: returns -1 if the first miscomparing byte in simple TLV List is less than that in compareBuffer.

CRRN3: returns 1 if the first miscomparing byte in simple TLV List is greater than that in compareBuffer.

Parameter errors

CRRP1: if compareBuffer is null NullPointerException shall be thrown.

CRRP2: if compareOffset or compareLength or both would cause access outside array bounds, or if compareLength is negative ArrayIndexOutOfBoundsException shall be thrown.

CRRP3: if valueOffset, dstLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.7.13.2 Test Suite files

Test Script: API_2_PAH_CPRVS_BSS_1.scr
Test Applet: API_2_PAH_CPRVS_BSS_1.java
Load Script: API_2_PAH_CPRVS_BSS_1.ldr
Cleanup Script: API_2_PAH_CPRVS_BSS_1.clr

Parameter File: API 2 PAH CPRVS BSS 1.par

6.2.7.13.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialise the handler		
	Select a TLV compareValue() with a null compareBuffer	NullDeinterFreentier is through	
	comparevalue() with a null comparebutter	NullPointerException is thrown	
2	initDisplayText() with length = 15		
	Select Text String TLV	A 1 1 0 10'D 1 5 1:	
	<pre>compareOffset > compareBuffer.length compareBuffer.length = 5</pre>	ArrayIndexOutOfBoundsExceptio	
	compareOffset = 6	n is thrown	
	compareLength = 0		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
-	compareBuffer.length = 5	n is thrown	
	compareOffset = -1		
	compareLength = 1		
4	compareLength >compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 5	n is thrown	
	<pre>compareOffset = 0 compareLength = 6</pre>		
5	compareOffset + compareLength	ArrayIndexOutOfBoundsExceptio	
J	>compareOffset + compareLength	n is thrown	
	compareBuffer.length = 5	II IS UIIOWII	
	compareOffset = 3		
	compareLength = 3		
6	compareLength < 0	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 5	n is thrown	
	compareOffset = 0		
	compareLength = -1		
7	initDisplayText() with length = 5		
	Select Text String TLV		
	valueOffset > Text String Length	ToolkitException.OUT_OF_TLV_	
	<pre>valueOffset = 7 compareBuffer.length = 15</pre>	BOUNDARIES is thrown	
	compareOffset = 0		
	compareLength = 0		
8	[Select Text String TLV]	ToolkitException.OUT_OF_TLV_	
•	valueOffset < 0	BOUNDARIES is thrown	
	<pre>valueOffset = -1</pre>		
	<pre>compareBuffer.length = 15</pre>		
	compareOffset = 0		
9	compareLength = 1 [Select Text String TLV]	ToolkitException.OUT_OF_TLV_	
9	compareLength > Text String length	BOUNDARIES is thrown	
	valueOffset = 0	BOUNDARIES IS UIIOWII	
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 7		
10	[Select Text String TLV]	ToolkitException.OUT_OF_TLV_	
	<pre>valueOffset + compareLength > Text String length</pre>	BOUNDARIES is thrown	
	<pre>length valueOffset = 2</pre>		
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 5		
11	Initialise the handler	Tablida and Historia	
	compareValue()	ToolkitException.UNAVAILABLE _ELEMENT is thrown	
12	initDisplayText()	LLLIVILIVI IS UIIOWII	
_	dcs = 4		
	buffer = 00 01 0F		
	Select Text String TLV		
	Initialise compareBuffer		
	compareBuffer =		
	04 00 01 00		
	04 00 01 0F	D 111 001	
	Compare buffers	Result is 00h	
		Result is 00h	

13	Initialise compareBuffer		
	compareBuffer =		
	04 00 01 02 03		
	04 05 06 07 08		
	05 0A 0B 0C 0D		
	0E 10		
	Compare buffers with same parameters	Result is -1	
	1.22.2		
14	Initialise compareBuffer		
	compareBuffer = 03 00 01 0F		
	Compare buffers with same parameters	Result is +1	
	Compare bullers with same parameters	Result is +1	
15	Initialise compareBuffer		
	compareBuffer =		
	55 55 55 01 02		
	03 04 05 06 07		
	08 09 0A 0B 0C		
	55 55 55 55		
	Compare buffers	Result is 00h	
	valueOffset = 2		
	compareOffset = 3		
	compareLength = 12		
4.0	Initialiae aemnara Buffar		
16	Initialise compareBuffer compareBuffer =		
	55 55 55 02 01		
	03 04 05 06 07		
	08 09 0A 0B 0C		
	55 55 55 55		
	Compare buffers with same parameters	Result is -1	
17	Initialise compareBuffer		
	compareBuffer =		
	55 55 55 01 02		
	03 04 05 06 07 08 09 0A 0A 0D		
	55 55 55 55 55		
	Compare buffers with same parameters	Result is +1	
18	Initialise compareBuffer	Tresuit is +1	
10	compareBuffer =		
	55 55 55 99 03		
	03 04 05 06 07		
	08 09 0A 0B 0C		
	55 55 55 55		
	Compare buffers with same parameters	Result is +1	
		-	1

6.2.7.13.4 Test Coverage

CRR number	Test case number
N1	12, 15
N2	13, 16
N3	14, 17, 18
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
C1	Does not apply for
	Proactive Handler
C2	11

- 6.2.7.14 Method findAndCopyValue(byte tag, byte[] dstBuffer, short valueOffset)

Test Area Reference API_2_PAH_FACYB_BS

6.2.7.14.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: looks for the first occurrence of a TLV element from the beginning of a TLV list and copy its value into a destination buffer.

CRRN2: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN3: if the method is successful then the corresponding TLV becomes current and dstOffset + length of the copied value is returned.

CRRN4: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if dstBuffer is null NullPointerException shall be thrown.

CRRP2: if dstOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.7.14.2 Test Suite files

Test Script:	API_2_PAH_FACYB_BS_1.scr
Test Applet:	API_2_PAH_FACYB_BS_1.java
Load Script:	API_2_PAH_FACYB_BS_1.ldr
Cleanup Script:	API_2_PAH_FACYB_BS_1.clr
Parameter File:	API 2 PAH FACYB BS 1.par

6.2.7.14.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialise the handler		
	FindAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	InitDisplayText() with length = 15		
	<pre>dstOffset > dstBuffer.length tag = 0Dh dstBuffer.length = 20 dstOffset = 21</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
3	<pre>dstOffset < 0 dstBuffer.length = 20 dstOffset = -1</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
4	<pre>length > dstBuffer.length dstBuffer.length = 15 dstOffset = 0</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
5	DstOffset + length >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	

	DstBuffer.length = 20	n is thrown	
	DstOffset = 5		
6	initDisplayText()		
	Select a TLV (tag 02h)		
	findAndCopyValue()	ToolkitException.UNAVAILABLE	 -
	tag = 03h	ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown.	
7	initDisplayText()		
	dcs = 4		
	buffer = 00 01 0F		
	Successful call	Result of findAndcopyValue() is	
	Tag = 0Dh	17	
	DstBuffer.length = 17		
	DstOffset = 0	Describie 001	
8	Compare buffer	Result is 00h	
	buffer = 04 00 01 0F		
9	initialise dstBuffer		
L	dstBuffer = 55 55 55		
	Successful call	Result of findAndcopyValue() is	
	dstBuffer.length = 20	19	
	dstOffset = 2		
10	Compare buffer	Result is 00h	
	buffer =		
	55 55 04 00 01		
	02 03 04 05 06		
	07 08 09 0A 0B 0C 0D 0E 0F 55		
	OC OD OE OF 55		
44	initDianta TautA		
	initDisplayText()		
11			
' '	dcs = 4		
11	dcs = 4 buffer = 00 01 0F		
	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV		
	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call	Result of findAndcopyValue() is	
	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh	Result of findAndcopyValue() is 17	
	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17		
	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0	17	
12	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer		
12	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F	17	
	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText()	17	
12	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4	17	
12	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F	Result is 00h	
12	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh)	Result is 00h Result of findAndcopyValue() is	
12	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh) tag = 8Dh	Result is 00h	
12	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh) tag = 8Dh dstBuffer.length = 17	Result is 00h Result of findAndcopyValue() is	
12	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh) tag = 8Dh dstBuffer.length = 17 dstOffset = 0	Result is 00h Result of findAndcopyValue() is 17	
12	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh) tag = 8Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer	Result is 00h Result of findAndcopyValue() is	
12	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh) tag = 8Dh dstBuffer.length = 17 dstOffset = 0	Result is 00h Result of findAndcopyValue() is 17	
12 13	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh) tag = 8Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F	Result is 00h Result of findAndcopyValue() is 17	
12	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh) tag = 8Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F Append tag 0Fh	Result is 00h Result of findAndcopyValue() is 17	
12 13	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh) tag = 8Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F Append tag 0Fh buffer = 00 01 0F	Result is 00h Result of findAndcopyValue() is 17 Result is 00h	
12 13	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh) tag = 8Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F Append tag 0Fh buffer = 00 01 0F Successful call (with tag 8Fh)	Result is 00h Result of findAndcopyValue() is 17 Result is 00h Result of findAndcopyValue() is	
12 13	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstoffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh) tag = 8Dh dstBuffer.length = 17 dstoffset = 0 Compare buffer buffer = 04 00 01 0F Append tag 0Fh buffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh	Result is 00h Result of findAndcopyValue() is 17 Result is 00h	
12 13	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh) tag = 8Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F Append tag 0Fh buffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh dstBuffer.length = 16	Result is 00h Result of findAndcopyValue() is 17 Result is 00h Result of findAndcopyValue() is	
12 13 14 15	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh) tag = 8Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F Append tag 0Fh buffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh dstBuffer.length = 16 dstOffset = 0	Result is 00h Result of findAndcopyValue() is 17 Result is 00h Result of findAndcopyValue() is 16	
12 13	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh) tag = 8Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F Append tag 0Fh buffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh dstBuffer.length = 16 dstOffset = 0 Compare buffer	Result is 00h Result of findAndcopyValue() is 17 Result is 00h Result of findAndcopyValue() is	
12 13 14 15	dcs = 4 buffer = 00 01 0F append a 2nd Text String TLV Successful call tag = 0Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F initDisplayText() dcs = 4 buffer = 00 01 0F Successful call (with tag 8Dh) tag = 8Dh dstBuffer.length = 17 dstOffset = 0 Compare buffer buffer = 04 00 01 0F Append tag 0Fh buffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh dstBuffer.length = 16 dstOffset = 0	Result is 00h Result of findAndcopyValue() is 17 Result is 00h Result of findAndcopyValue() is 16	

6.2.7.14.4 Test Coverage

CRR number	Test case number
N1	8, 10, 12
N2	6
N3	7, 9, 11
N4	13, 14, 15, 16
P1	1
P2	2, 3, 4, 5
C1	Does not apply for
	Proactive Handler

6.2.7.15 Method findAndCopyValue(byte tag, byte occurence, short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength)

Test Area Reference API_2_PAH_FACYBBS_BSS

6.2.7.15.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public short findAndCopyValue(byte tag, byte occurence,

short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength)

throws java.lang.NullPointerException,

java.lang.ArrayIndexOutOfBoundsException,

ToolkitException

Normal execution

CRRN1: looks for the indicated occurrence of a TLV element from the beginning of a TLV list and copy its value into a destination buffer.

CRRN2: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN3: if the method is successful then the corresponding TLV becomes current and dstOffset + dstLength is returned.

CRRN4: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if dstBuffer is null NullPointerException shall be thrown.

CRRP2: if dstOffset or dstLength or both would cause access outside array bounds, or if dstLength is negative ArrayIndexOutOfBoundsException shall be thrown.

CRRP3: if valueOffset, dstLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.7.15.2 **Test Suite files**

Test Script: API_2_PAH_FACYBBS_BSS_1.scr Test Applet: API_2_PAH_FACYBBS_BSS_1.java

Load Script: API_2_PAH_FACYBBS_BSS_1.ldr

Cleanup Script: API_2_PAH_FACYBBS_BSS_1.clr

Parameter File: API_2_PAH_FACYBBS_BSS_1.par

6.2.7.15.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialise the handler	•	•
	findAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	initDisplayText() with length = 15		
	<pre>dstOffset > dstBuffer.length tag = 0Dh, occurrence = 1 valueOffset = 0 dstBuffer.length = 5 dstOffset = 6 dstLength = 0</pre>	ArrayIndexOutOfBoundsException is thrown	
3	<pre>dstOffset < 0 dstBuffer.length = 5 dstOffset = -1 dstLength = 1</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
4	<pre>dstLength >dstBuffer.length dstBuffer.length = 5 dstOffset = 0 dstLength = 6</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
5	<pre>dstOffset + dstLength >dstBuffer.length dstBuffer.length = 5 dstOffset = 3 dstLength = 3</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
6	<pre>dstLength < 0 dstBuffer.length = 5 dstOffset = 0 dstLength = -1</pre>	ArrayIndexOutOfBoundsException is thrown	
7	initDisplayText() with length = 5		
	<pre>valueOffset > Text String Length tag = 0Dh, occurrence = 1 valueOffset = 7 dstBuffer.length = 15 dstOffset = 0 dstLength = 0</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
8	<pre>valueOffset < 0 valueOffset = -1 dstBuffer.length = 15 dstOffset = 0 dstLength = 1</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
9	<pre>dstLength > Text String length valueOffset = 0 dstBuffer.length = 15 dstOffset = 0 dstLength = 7</pre>	ToolkitException.OUT_OF_TLV_BOUNDARIES is thrown	
10	<pre>valueOffset + dstLength > Text String length valueOffset = 2 dstBuffer.length = 15 dstOffset = 0 dstLength = 5</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
11	InitDisplayText()		
	Select a TLV (tag 02h) findAndCopyValue() tag = 0Dh occurrence = 2	ToolkitException.UNAVAILABLE _ELEMENT is thrown	
4.5	Call the getValueLength() method	ToolkitException.UNAVAILABLE _ELEMENT is thrown.	
12	initDisplayText() dcs = 4		

	[1 cs	1	1
	buffer = 00 01 0F	Deput of fire day do not be a larger	
	Successful call	Result of findAndCopyValue() is	
	<pre>tag = 0Dh, occurrence = 1 valueOffset = 0</pre>	17	
	dstBuffer.length = 17		
	dstOffset = 0		
	dstLength = 17		
13	Compare buffer	Result is 00h	
	buffer = 04 00 01 0F		
14	initialise dstBuffer		
	dstBuffer = 55 55 55		
	Successful call	Result of findAndcopyValue() is	
	<pre>tag = 0Dh, occurrence = 1 valueOffset = 2</pre>	15	
	dstBuffer.length = 20		
	dstOffset = 3		
	dstLength = 12		
15	Compare buffer	Result is 00h	
	buffer =		
	55 55 55 01 02		
	03 04 05 06 07 08 09 0A 0B 0C		
	55 55 55 55 55		
16	Append a Text String TLV		
	tag = 0D		
	buffer = 00 11 22 33 44 55 (no specific		
<u> </u>	DCS byte)		
	Successful call	Result of findAndCopyValue() is	
	<pre>tag = 0Dh, occurrence = 1 valueOffset = 0</pre>	17	
	dstBuffer.length = 17		
	dstOffset = 0		
	dstLength = 17		
17	Compare buffer	Result is 00h	
	buffer = 04 00 01 0F		
18	Successful call	Result of findAndCopyValue() is	
10	tag = 0Dh, occurrence = 2	6	
	valueOffset = 0	0	
	dstBuffer.length = 6		
	dstOffset = 0		
1.0	dstLength = 6	D 11: 00:	
19	Compare buffer	Result is 00h	
	buffer = 00 11 22 33 44 55		
20	initDisplayText()		
20	dcs = 4		
	buffer = 00 01 0F		
	Successful call (with tag 8Dh)	Result of findAndcopyValue() is	
	tag = 8Dh	17	
	occurrence = 1		
	<pre>valueOffset = 0 dstBuffer.length = 17</pre>		
	dstBuffer.length = 1/		
	dstLength = 17		
21	Compare buffer	Result is 00h	
	buffer = 04 00 01 0F		
22	Append tag 0Fh		
<u> </u>	buffer = 00 01 0F		
	Successful call (with tag 8Fh)	Result of findAndcopyValue() is	
	<pre>tag = 8Fh occurrence = 1</pre>	16	
	valueOffset = 0		
	dstBuffer.length = 16		
	dstOffset = 0		
	dstLength = 16		
23	Compare buffer	Result is 00h	
	buffer = 00 01 0F		

6.2.7.15.4 Test Coverage

CRR number	Test case number
N1	13, 15, 17, 19
N2	11
N3	12, 14, 16, 18
N4	20, 21, 22, 23
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
C1	Does not apply for ProactiveHandler

6.2.7.16 Method findAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset)

Test Area Reference API_2_PAH_FACRB_BS

6.2.7.16.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public byte findAndCompareValue(byte tag,

byte[] compareBuffer, short compareOffset)

throws java.lang.NullPointerException,

java.lang.ArrayIndexOutOfBoundsException,

ToolkitException

Normal execution

Looks for the first occurrence of a TLV element from beginning of a TLV list and compare its value with a buffer:

CRRN1: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN2: if the method is successful then the corresponding TLV becomes current.

CRRN3: if identical returns 0.

CRRN4: if the first miscomparing byte in simple TLV is less than that in compareBuffer returns -1.

CRRN5: if the first miscomparing byte in simple TLV is greater than that in compareBuffer returns 1.

CRRN6: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if compareBuffer is null NullPointerException shall be thrown.

CRRP2: if compareOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.7.16.2 Test Suite files

Test Script: API_2_PAH_FACRB_BS_1.scr

Test Applet: API_2_PAH_FACRB_BS_1.java

Load Script: API_2_PAH_FACRB_BS_1.ldr

Cleanup Script: API_2_PAH_FACRB_BS_1.clr

Parameter File: API_2_PAH_FACRB_BS_1.par

6.2.7.16.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialise the handler	·	
	findAndCompareValue() with a null dstBuffer	NullPointerException is thrown	
2	initDisplayText() with length = 15		
	compareOffset > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	tag = 0Dh	n is thrown	
	compareBuffer.length = 20		
	compareOffset = 21	A de de «O. «O·De» de F (i -	
3	<pre>compareOffset < 0 compareBuffer.length = 20</pre>	ArrayIndexOutOfBoundsExceptio	
	compareOffset = -1	n is thrown	
4	length > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
•	compareBuffer.length = 15	n is thrown	
	compareOffset = 0		
5	compareOffset + length >	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length	n is thrown	
	<pre>compareBuffer.length = 20 compareOffset = 5</pre>		
	CompareOffset = 5		
6	InitDisplayText()		
	Select a TLV (tag 02h)		
	findAndCompareValue()	ToolkitException.UNAVAILABLE	
	tag = 03h	_ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
		ELEMENT is thrown.	
7	initDisplayText()		
	dcs = 4		
	buffer = 00 01 0F		
	Initialise compareBuffer		
	compareBuffer = 04 00 01 0F		
	Compare buffers	Result is 00h	
	tag = 0Dh	Trocall to com	
	compareOffset = 0		
8	Verify current TLV	Result is 17	
	getValueLength()		
9	Initialise compareBuffer		
	compareBuffer = 04 00 01 10		
	Compare buffers with same parameters	Result is -1	
	,	1 1000	
10	Initialise compareBuffer		
	compareBuffer =		
	03 00 01 0F		
	Compare buffers with same parameters	Result is +1	
11	Initialise compareBuffer		
-	compareBuffer =		
	55 55 04 00 01		
	02 03 04 05 06		
	07 08 09 0A 0B 0C 0D 0E 0F 55		
	Compare buffers	Result is 00h	
	compareOffset = 2	Treating con	
	_		
12	append a Text String TLV		
	tag = 0Dh		
	buffer = 00 11 22 33 44 55		

CompareButfer = 55 55 04 90 01 02 03 04 95 06 07 08 09 90 A0 0B 02 00 05 0F 55				
S	i	Initialise compareBuffer		
02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F 55 Compare buffers CompareOffset = 2		compareBuffer =		
07 08 09 0A 0B 0C DD 0F 55 Compare buffers CompareOffset = 2 Result is 00h		55 55 04 00 01		
OC OD OE OF 55 Compare buffers Compare buffers CompareOffset = 2		02 03 04 05 06		
Compare buffers Compare Duffers Compare Duffer Compare Duffer S5 55 04 01 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F 55		07 08 09 0A 0B		
CompareOffset = 2		OC OD OE OF 55		
CompareOffset = 2		Compare buffers	Result is 00h	
13			1 10001110 0011	
CompareButfer = 5				
CompareBuffer = 5 5 5 0 4 0 1 0 0 0 0 0 0 0 0	13	Initialise compareRuffer		
Sis 55 04 01 01 02 03 04 05 06 07 08 09 0.0 05 05 00 00 00 09 05 5	'0			
02 03 04 05 06				
07 08 09 0A 0B				
OC 0D 0E 0F 55				
Compare buffers Compare buffers CompareOffset = 2				
CompareOffset = 2			Popult is 1	
Initialise compareBuffer compareBuffer = 55 55 04 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0D 10 55 CompareOffset = 2 15 initDisplayText() dcs = 4 buffer = 00 01 0F Initialise compareBuffer CompareBuffer = 04 00 01 0F Successful call (with tag 8Dh) tag = 8Dh compareOffset = 0 16 Append tag 0Fh buffer = 00 01 0F Initialise compareBuffer compareBuffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh compareBuffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh compareBuffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh compareBuffer = 00 01 0F Successful call (with tag 8Fh) Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h Result is 00h			Result is -1	
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CompareBuffer =	4.4	Initialiae compare Duffer		
55 55 04 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0D 10 55	14			
02 03 04 05 06 07 08 09 0A 0B 0C 0D 0D 10 55 Compare buffers compareoffset = 2 15		_		
07 08 09 0A 0B 0C 0D 0D 10 55 Compare buffers compareOffset = 2 15 initDisplayText() dcs = 4 buffer = 00 01 0F Initialise compareBuffer CompareBuffer = 04 00 01 0F Successful call (with tag 8Dh) tag = 8Dh compareBuffer.length = 17 compareOffset = 0 16 Append tag 0Fh buffer = 00 01 0F Initialise compareBuffer compareBuffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh compareBuffer.length = 16 compareOffset = 0 17 Initialise compareBuffer compareBuffer = 00 99 01 03 0F Successful call (with tag 8Fh) tag = 8Fh compareBuffer = 00 99 01 03 0F Result is +1 Result is +1				
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17 Initialise compareBuffer compareBuffer = 00 99 01 03 0F Successful call (with tag 8Fh) tag = 8Fh Result is +1	16	Initialise compareBuffer CompareBuffer = 04 00 01 0F Successful call (with tag 8Dh) tag = 8Dh compareBuffer.length = 17 compareOffset = 0 Append tag 0Fh buffer = 00 01 0F Initialise compareBuffer compareBuffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh		
compareBuffer = 00 99 01 03 0F Successful call (with tag 8Fh) tag = 8Fh Result is +1	16	Initialise compareBuffer CompareBuffer = 04 00 01 0F Successful call (with tag 8Dh) tag = 8Dh compareBuffer.length = 17 compareOffset = 0 Append tag 0Fh buffer = 00 01 0F Initialise compareBuffer compareBuffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh compareBuffer.length = 16		
Successful call (with tag 8Fh) tag = 8Fh Result is +1		Initialise compareBuffer CompareBuffer = 04 00 01 0F Successful call (with tag 8Dh) tag = 8Dh compareBuffer.length = 17 compareOffset = 0 Append tag 0Fh buffer = 00 01 0F Initialise compareBuffer compareBuffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh compareBuffer.length = 16 compareOffset = 0		
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gomparoBuffor longth = 16		Initialise compareBuffer CompareBuffer = 04 00 01 0F Successful call (with tag 8Dh) tag = 8Dh compareBuffer.length = 17 compareOffset = 0 Append tag 0Fh buffer = 00 01 0F Initialise compareBuffer compareBuffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh compareBuffer.length = 16 compareOffset = 0 Initialise compareBuffer compareBuffer = 00 99 01 03 0F	Result is 00h	
CompareBurrer.rengen - 10		Initialise compareBuffer CompareBuffer = 04 00 01 0F Successful call (with tag 8Dh) tag = 8Dh compareBuffer.length = 17 compareOffset = 0 Append tag 0Fh buffer = 00 01 0F Initialise compareBuffer compareBuffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh compareBuffer.length = 16 compareOffset = 0 Initialise compareBuffer compareBuffer = 00 99 01 03 0F Successful call (with tag 8Fh) Successful call (with tag 8Fh)	Result is 00h	
compareOffset = 0		Initialise compareBuffer CompareBuffer = 04 00 01 0F Successful call (with tag 8Dh) tag = 8Dh compareBuffer.length = 17 compareOffset = 0 Append tag 0Fh buffer = 00 01 0F Initialise compareBuffer compareBuffer = 00 01 0F Successful call (with tag 8Fh) tag = 8Fh compareBuffer.length = 16 compareOffset = 0 Initialise compareBuffer compareBuffer = 00 99 01 03 0F Successful call (with tag 8Fh) Successful call (with tag 8Fh)	Result is 00h	

6.2.7.16.4 Test Coverage

CRR number	Test case number
N1	6
N2	8
N3	7, 11, 12, 17
N4	9, 13
N5	10, 14
N6	15, 16
P1	1
P2	2, 3, 4, 5
C1	Does not apply for
	Proactive Handler

 6.2.7.17 Method findAndCompareValue(byte tag, byte occurence, short valueOffset, byte[] compareBuffer, short compareOffset, short compareLength)

Test Area Reference API_2_PAH_FACRBBS_BSS

6.2.7.17.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public byte findAndCompareValue(byte tag,

byte occurence, short valueOffset, byte[] compareBuffer, short compareJength)

short compareLength)
throws java.lang.NullPointerException,

java.lang.ArrayIndexOutOfBoundsException,

ToolkitException

Normal execution

Looks for the indicated occurrence of a TLV element from the beginning of a TLV list and compare its value with a buffer:

CRRN1: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN2: if the method is successful then the corresponding TLV becomes current.

CRRN3: if identical 0 is returned.

CRRN4: if the first miscomparing byte in simple TLV is less than that in compareBuffer -1 is returned.

CRRN5: if the first miscomparing byte in simple TLV is greater than that in compareBuffer 1 is returned

CRRN6: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if compareBuffer is null NullPointerException shall be thrown.

CRRP2: if compareOffset or compareLength or both would cause access outside array bounds, or if compareLength is negative ArrayIndexOutOfBoundsException shall be thrown.

CRRP3: if valueOffset, compareLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

CRRP4: if an input parameter is not valid (e.g. occurence = 0) an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException BAD_INPUT_PARAMETER.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.7.17.2 Test Suite files

Test Script: API_2_PAH_FACRBBS_BSS_1.scr

Test Applet: API_2_PAH_FACRBBS_BSS_1.java

Load Script: API_2_PAH_FACRBBS_BSS_1.ldr

API 2 PAH FACRBBS BSS 1.par

6.2.7.17.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialise the handler	AllExpediation	Al Do Expediation
	findAndCompareValue() with a null compareBuffer	NullPointerException is thrown	
2	initDisplayText() with length = 15		
	<pre>compareOffset > compareBuffer.length tag = 0Dh, occurrence = 1 valueOffset = 0 compareBuffer.length = 5 compareOffset = 6 compareLength = 0</pre>	ArrayIndexOutOfBoundsException is thrown	
3	<pre>compareOffset < 0 compareBuffer.length = 5 compareOffset = -1 compareLength = 1</pre>	ArrayIndexOutOfBoundsException is thrown	
4	<pre>compareLength >compareBuffer.length compareBuffer.length = 5 compareOffset = 0 compareLength = 6</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
5	<pre>compareOffset + compareLength >compareBuffer.length compareBuffer.length = 5 compareOffset = 3 compareLength = 3</pre>	ArrayIndexOutOfBoundsException is thrown	
6	<pre>compareLength < 0 compareBuffer.length = 5 compareOffset = 0 compareLength = -1</pre>	ArrayIndexOutOfBoundsException is thrown	
7	initDisplayText() with length = 5		
	<pre>valueOffset > Text String Length tag = 0Dh, occurrence = 1 valueOffset = 7 compareBuffer.length = 15 compareOffset = 0 compareLength = 0</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
8	<pre>valueOffset < 0 valueOffset = -1 compareBuffer.length = 15 compareOffset = 0 compareLength = 1</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
9	<pre>compareLength > Text String length valueOffset = 0 compareBuffer.length = 15 compareOffset = 0 compareLength = 7</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
10	<pre>valueOffset + compareLength > Text String</pre>	ToolkitException.OUT_OF_TLV_BOUNDARIES is thrown	
11	Invalid parameter occurrence = 0	ToolkitException.BAD_INPUT_P ARAMETER is thrown	
12	InitDisplayText()		
	Select a TLV (tag 02h)		
	findAndCompareValue() tag = 0Dh occurrence = 2 Call the getValueLength() method	ToolkitException.UNAVAILABLE _ELEMENT is thrown ToolkitException.UNAVAILABLE	
	Jan the gervalueLength() method	_ELEMENT is thrown.	

		7	
13	initDisplayText()		
	dcs = 4		
	buffer = 00 01 0F		
	Initialise compareBuffer		
	compareBuffer =		
	04 00 01 0F		
	findAndCompareValue()	Result is 00h	
	tag = 0Dh, occurrence = 1		
	<pre>valueOffset = 0</pre>		
	compareOffset = 0		
	compareLength = 17		
.	V. 'C	15 11 15	
14	Verify current TLV	Result is 17	
	getValueLength()		
15	Initialise compareBuffer		
	compareBuffer = 04 00 01 10		
		Decult is 4	
	Compare buffers with same parameters	Result is -1	
4.0	Latitude Communication Communi	-	
16	Initialise compareBuffer		
	<pre>compareBuffer = 03 00 01 0F</pre>		
<u> </u>		Popult is 11	
	Compare buffers with same parameters	Result is +1	
4 -	Initializa compara Deffer		
17	Initialise compareBuffer		
	compareBuffer =		
	55 55 55 01 02 03 04 05 06 07		
	08 09 0A 0B 0C		
	55 55 55 55		
	Compare buffers	Result is 00h	
	valueOffset = 2	result is oon	
	compareOffset = 3		
	compareLength = 12		
18	Initialise compareBuffer		
18	Initialise compareBuffer compareBuffer =		·
18	•		
18	compareBuffer = 55 55 55 02 01 03 04 05 06 07		
18	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C		
18	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55		
18	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C	Result is -1	
	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters	Result is -1	
18	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55	Result is -1	
	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer =	Result is -1	
	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02	Result is -1	
	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07	Result is -1	
	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 55 55 55 55 55 55 55 55	Result is -1	
	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0A 0D 55 55 55 55 55		
	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 55 55 55 55 55 55 55 55	Result is -1 Result is +1	
19	CompareBuffer =		
	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0A 0D 55 55 55 55 55 Compare buffers with same parameters append a Text String TLV		
19	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0A 0D 55 55 55 55 55 Compare buffers with same parameters append a Text String TLV tag = 0Dh		
19	CompareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 55 55 55 55 55 55 55 55		
19	CompareBuffer		
19	CompareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 55 55 55 55 55 55 55 55		
19	CompareBuffer =		
19	CompareBuffer =	Result is +1	
19	CompareBuffer =	Result is +1	
19	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0A 0D 55 55 55 55 Compare buffers with same parameters append a Text String TLV tag = 0Dh buffer = 00 11 22 33 44 55 Initialise compareBuffer compareBuffer = 04 00 01 0F findAndCompareValue() tag = 0Dh, occurrence = 1 valueOffset = 0 compareOffset = 0	Result is +1	
19	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0A 0D 55 55 55 55 Compare buffers with same parameters append a Text String TLV tag = 0Dh buffer = 00 11 22 33 44 55 Initialise compareBuffer compareBuffer = 04 00 01 0F findAndCompareValue() tag = 0Dh, occurrence = 1 valueOffset = 0	Result is +1	
19	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 55 55 55 55 55 55 55 55	Result is +1	
19	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0A 0D 55 55 55 55 55 Compare buffers with same parameters append a Text String TLV tag = 0Dh buffer = 00 11 22 33 44 55 Initialise compareBuffer compareBuffer = 04 00 01 0F findAndCompareValue() tag = 0Dh, occurrence = 1 valueOffset = 0 compareOffset = 0 compareLength = 17 Initialise compareBuffer	Result is +1	
19	CompareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 55 55 55 55 55 55	Result is +1	
19	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer compareBuffer = 55 55 50 1 02 03 04 05 06 07 08 09 0A 0A 0D 55 55 55 55 55 Compare buffers with same parameters append a Text String TLV tag = 0Dh buffer = 00 11 22 33 44 55 Initialise compareBuffer compareBuffer = 04 00 01 0F findAndCompareValue() tag = 0Dh, occurrence = 1 valueOffset = 0 compareOffset = 0 compareCompareLength = 17 Initialise compareBuffer compareBuffer = 00 11 22 33 44 55	Result is +1 Result is 00h	
19	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer	Result is +1	
19	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer 55 55 50 1 02 03 04 05 06 07 08 09 0A 0A 0D 55 55 55 55 Compare buffers with same parameters Append a Text String TLV	Result is +1 Result is 00h	
19	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 55 55 55 55 55 55 55 55	Result is +1 Result is 00h	
19	compareBuffer = 55 55 55 02 01 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 Compare buffers with same parameters Initialise compareBuffer 55 55 50 1 02 03 04 05 06 07 08 09 0A 0A 0D 55 55 55 55 Compare buffers with same parameters Append a Text String TLV	Result is +1 Result is 00h	

22	Initialise compareBuffer		
	compareBuffer =		
	00 11 22 33 44 66		
	findAndCompareValue()	Result is -1	
	tag = 0Dh, occurrence = 2		
	<pre>valueOffset = 0</pre>		
	compareOffset = 0		
	compareLength = 6		
23	initDisplayText()		
	dcs = 4		
	buffer = 00 01 0F		
	Initialise compareBuffer		
	CompareBuffer = 04 00 01 0F		
	Successful call (with tag 8Dh)	Result is 00h	
	tag = 8Dh, occurrence = 1		
	valueOffset = 0		
	compareBuffer.length = 17		
	<pre>compareOffset = 0 compareLength = 17</pre>		
24	Append tag 0Fh		
24	buffer = 00 01 0F		
	Initialise compareBuffer		
	compareBuffer = 00 01 0F		
	Successful call (with tag 8Fh)	Result is 00h	
	tag = 8Fh, occurrence = 1	Result is oon	
	valueOffset = 0		
	compareBuffer.length = 16		
	compareOffset = 0		
	compareLength = 16		
25	Initialise compareBuffer		
	compareBuffer =0099 02 0F		
	findAndCompareValue()	Result is +1	
	tag = 0Dh, occurrence = 1		
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 17		

6.2.7.17.4 Test Coverage

CRR number	Test case number
N1	12
N2	14
N3	13, 17, 20, 21
N4	15, 18, 22
N5	16, 19
N6	23, 24
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
P4	11
C1	Does not apply for Proactive Handler

- 6.2.7.18 Method appendArray

Test Area Reference: API_2_PAH_APDA_BSS

6.2.7.18.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

java.lang.ArrayIndexOutOfBoundsException, ToolkitException

Normal execution

CRRN1: appends a buffer into the Edithandler buffer

CRRN2: a successful append does not modify the TLV selected

Parameters error

CRRP1: if buffer is null, a java.lang.NullPointerException is thrown

CRRP2: if offset or length or both would cause access outside the array bounds, or if length is negative, a java.lang.ArrayIndexOutOfBoundsException is thrown.

Context errors

CRRC1: if the EditHandler buffer is too small to append the requested data, a ToolkitException is thrown with reason code HANDLER_OVERFLOW

CRRC2: if the EditHandler buffer is busy, a ToolkitException is thrown with reason code $HANDLER_NOT_AVAILABLE$

6.2.7.18.2 Test suite files

Test Script: API_2_PAH_APDA_<u>BSS_</u>1.scr

Test Applet: API_2_PAH_APDA_1.java

Load Script: API_2_PAH_APDA_1.ldr

Cleanup Script:

-API_2_PAH_APDA_1.clrAPI_2_PAH_APDA_BSS_1.java

Load Script: API 2 PAH APDA BSS 1.ldr

Cleanup Script: API 2 PAH APDA BSS 1.clr

Parameter File: API_2_PAH_APDA_BSS_1.par

6.2.7.18.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Null buffer	NullPointerException is thrown	
2	offset > buffer.length	ArrayIndexOutOfBoundsExceptio	
	buffer.length = 5	n is thrown	
	offset = 6		
	length = 0		
3	offset < 0	ArrayIndexOutOfBoundsExceptio	
	buffer.length = 5	n is thrown	
	offset = -1		
	length = 1	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
4	length > buffer.length	ArrayIndexOutOfBoundsExceptio	
	buffer.length = 5	n is thrown	
	offset = 0 length = 6		
5	offset + length > buffer.length	ArrayladayOutOfPayadaEyaantia	
5	buffer.length = 5	ArrayIndexOutOfBoundsExceptio n is thrown	
	offset = 3	II IS UIIOWII	
	length = 3		
6	length < 0	ArrayIndexOutOfBoundsExceptio	
	buffer.length = 5	n is thrown	
	offset = 0		
	length = -1		
7	Handler overflow	ToolkitException.HANDLER_OV	

buffer.length = 256 offset = 0 length = 256 8 Initialise handler	
length = 256	
Select Command Details TLV	
Successful call	
buffer = FF FE F8	
offset = 0	
length = 8	
Verify Current TLV: Call getValueLength() Result is 03h	
9 Clear the handler	
Successful call	
buffer = FF FE F8	
offset = 0	
length = 8	
Call copy() method	
Compare the arrays Result of	
compareBuffer = FF FE F8 javacard.framework.Util.arrayCo	
mpare() is 00h	
10 Successful call	
buffer = 00 01 07	
offset = 2	
length = 6	
Call copy() method	
Compare the arrays Result of	
compareBuffer = FF FE F8 02 03 07 javacard.framework.Util.arrayCo	
mpare() is 00h	
11 Successful call	
buffer = 11 22 88	
offset = 2	
length = 4	
Call copy() method	
Compare the arrays Result of	
compareBuffer = FF FE F8 02 03 07 33 javacard.framework.Util.arrayCo	
44 55 66 mpare() is 00h	
12 Clear the handler	
Successful call	
buffer = 00 01 FC	
offset = 0	
length = 253	
Call getLength() method result = 253	
Call copy() method	
Compare handler Result of	
compareBuffer = 00 01 FC javacard.framework.Util.arrayCo	
mpare() is 00h	

6.2.7.18.4 Test Coverage

CRR number	Test case number
N1	9, 10, 11, 12
N2	8
P1	1
P2	2, 3, 4, 5, 6
C1	7
C2	Does not apply for
	ProactiveHandler

- 6.2.7.19 Method appendTLV(byte tag, byte value)

Test Area Reference: API_2_PAH_APTLBB 6.2.7.19.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API. ${\tt void\ appendTLV\ (byte\ tag,\ byte\ value)}$

throws ToolkitException

Normal execution

CRRN1: Appends a TLV element to the current TLV list (1-byte element).

CRRN2: A successful append does not modify the TLV selected.

Parameters error

No requirements

Context errors

CRRC1: if the EditHandler buffer is too small to append the requested data, a ToolkitException is thrown with reason code HANDLER_OVERFLOW

CRRC2: if the EditHandler buffer is busy, a ToolkitException is thrown with reason code $HANDLER_NOT_AVAILABLE$

6.2.7.19.2 Test suite files

Test Script: API_2_PAH_APTLBB_1.scr

Test Applet: API_2_PAH_APTLBB_1.java

Load Script: API_2_PAH_APTLBB_1.ldr

Cleanup Script: API_2_PAH_APTLBB_1.clr

Parameter File: API 2 PAH APTLBB 1.par

6.2.7.19.3 Test procedure

ld	Description	API Expectation	APDU Expectation
		API Expectation	APDU Expectation
1	Call appendArray() length = 251		
	Handler Overflow: Call the appendTLV()	Tablista vantion HANDLED OV	
		ToolkitException.HANDLER_OV	
	method	ERFLOW is thrown	
2	Initialise handler		
	Select Command Details TLV		
	Call the appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	
3	Clear the handler		
	Successful call		
	tag = 84h		
	value = 00h		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 01 00	javacard.framework.Util.arrayCo	
		mpare() is 00h	
4	Successful call		
	tag = 01h		
	value = FEh		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 01 00 01 01 FE	javacard.framework.Util.arrayCo	
		mpare() is 00h	
5	Clear the handler		
	Call appendArray()		
	length = 250		
	buffer = 00 81 F7 03 04 F9		

Successful call		
tag = 84h		
value = 00h		
Call getLength() method	result = 253	
Call copy() method		
Compare the array	Result of	
	javacard.framework.Util.arrayCo	
00	mpare() is 00h	

6.2.7.19.4 Test Coverage

CRR number Test case number		
N1	3, 4, 5	
N2	2	
C1	1	
C2 Does not apply for		
	Proactive Handler	

- 6.2.7.20 Method appendTLV(byte tag, byte value1, byte value2)

Test Area Reference: API_2_PAH_APTLBBB

6.2.7.20.1 Conformance requirements:

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: Appends a TLV element to the current TLV list (2-byte element).

CRRN2: A successful append does not modify the TLV selected.

Parameters error

No requirements

Context errors

CRRC1: if the EditHandler buffer is too small to append the requested data, a ToolkitException is thrown with reason code HANDLER_OVERFLOW

CRRC2: if the EditHandler buffer is busy, a ToolkitException is thrown with reason code HANDLER_NOT_AVAILABLE

6.2.7.20.2 Test suite files

Test Script: API_2_PAH_APTLBBB_1.scr

Test Applet: API_2_PAH_APTLBBB_1.java

Load Script: API_2_PAH_APTLBBB_1.ldr

Cleanup Script: API_2_PAH_APTLBBB_1.clr

Parameter File: API_2_PAH_APTLBBB_1.par

6.2.7.20.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call the initDisplayText() length = 250		•
	Handler Overflow: Call the appendTLV() method	ToolkitException.HANDLER_OV ERFLOW is thrown	
2	Initialise handler		
	Select Command Details TLV		
	Call the appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	
3	Clear the handler		
	Successful call		
	tag = 84h		
	<pre>value1 = 00h value2 = 01h</pre>		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 02 00 01	javacard.framework.Util.arrayCo mpare() is 00h	
4	Successful call tag = 01h value1 = FEh value2 = FDh		
	Call copy() method		
	Compare the arrays compareBuffer = 84 02 00 01 01 02 FE FD	Result of javacard.framework.Util.arrayCo mpare() is 00h	
5	Clear the handler	· · ·	
	Call appendArray() length = 249 buffer = 00 81 F6 03 04 F8 Successful call		
	tag = 84h value1 = 00h value2 = 01h		
	Call getLength() method	result = 253	
	Call copy() method		
	Compare handler compareBuffer = 00 81 F6 03 04 F8 84 02 00 01	Result of javacard.framework.Util.arrayCompare() is 00h	

6.2.7.20.4 Test Coverage

CRR number	Test case number	
N1	3, 4, 5	
N2	2	
C1	1	
C2	Does not apply for	
	Proactive Handler	

6.2.7.21 Method appendTLV(byte tag, byte[] value, short valueoffset, short valuelength)

Test Area Reference: API_2_PAH_APTLB_BSS

6.2.7.21.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

void appendTLV (byte tag, byte[] value, short valueoffset,

short valuelength)

throws java.lang.NullPointerException,

 ${\tt java.lang.ArrayIndexOutOfBoundsException,}$

ToolkitException

Normal execution

CRRN1: Appends a TLV element to the current TLV list (byte-array element).

CRRN2: A successful append does not modify the TLV selected.

Parameters error

CRRP1: if value is null, a java.lang.NullPointerException is thrown

CRRP2: if valueoffset or valuelength or both would cause access outside the array bounds, or if length is negative, a java.lang.ArrayIndexOutOfBoundsException is thrown.

Context errors

CRRC1: if the EditHandler buffer is too small to append the requested data, a ToolkitException is thrown with reason code HANDLER_OVERFLOW

CRRC2: if the EditHandler buffer is busy, a ToolkitException is thrown with reason code HANDLER_NOT_AVAILABLE

CRRC3: if valuelength is greater than 255, a ToolkitException is thrown with reason code BAD_INPUT_PARAMETER

6.2.7.21.2 Test suite files

Test Script: API_2_PAH_APTLB_BSS_1.scr

Test Applet: API_2_PAH_APTLB_BSS_1.java

Load Script: API_2_PAH_APTLB_BSS_1.ldr

Cleanup Script: API_2_PAH_APTLB_BSS_1.clr

Parameter File: API 2 PAH APTLB BSS 1.par

6.2.7.21.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Null value	NullPointerException is thrown	-
2	valueOffset > value.length	ArrayIndexOutOfBoundsExceptio	
	value.length = 5	n is thrown	
	valueOffset = 6		
	valueLength = 0		
3	valueOffset < 0	ArrayIndexOutOfBoundsExceptio	
	value.length = 5	n is thrown	
	valueOffset = -1		
	valueLength = 1		
4	valueLength > value.length	ArrayIndexOutOfBoundsExceptio	
	value.length = 5	n is thrown	
	valueOffset = 0		
	valueLength = 6		
5	valueOffset + valueLength > value.length	ArrayIndexOutOfBoundsExceptio	
	value.length = 5	n is thrown	
	valueOffset = 3		
	valueLength = 3		
6	valueLength < 0	ArrayIndexOutOfBoundsExceptio	
	value.length = 5	n is thrown	
	valueOffset = 0		
	valueLength = -1		
7	Handler overflow	ToolkitException.HANDLER_OV	

		_	
	value.length = 254	ERFLOW is thrown	
	valueOffset = 0		
_	valueLength = 254	ToolkitEveestiss DAD INDUT D	
8	Bad parameter value.length = 256	ToolkitException.BAD_INPUT_P	
	valueOffset = 0	ARAMETER is thrown	
	valueLength = 256		
9	Initialise handler		
ا ا	Select Command Details TLV	<u> </u>	
	Successful call		
	tag = 04		
	value = FF FE F8		
	valueOffset = 0		
	valueLength = 8		
	Verify Current TLV: Call getValueLength()	Result is 03h	
10	Clear the handler		
	Successful call		
	tag = 04		
	value = FF FE F8		
	valueOffset = 0		
<u> </u>	valueLength = 8		
<u> </u>	Call copy() method	D 11 (
	Compare the arrays	Result of	
	compareBuffer = 04 08 FF FE F8	javacard.framework.Util.arrayCo	
		mpare() is 00h	
11	Successful call		
	tag = 85h		
	<pre>value = 00 01 07 valueOffset = 2</pre>		
	valueLength = 6		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 04 08 FF FE F8 85 06 02	javacard.framework.Util.arrayCo	
	03 07	mpare() is 00h	
40	Successful call	Imparely to con	
172			
12			
12	tag = 01 value = 11 22 88		
12	tag = 01 value = 11 22 88 valueOffset = 2		
12	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4		
12	<pre>tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method</pre>		
12	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays	Result of	
12	<pre>tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02</pre>	javacard.framework.Util.arrayCo	
	<pre>tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66</pre>		
13	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler	javacard.framework.Util.arrayCo	
	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call	javacard.framework.Util.arrayCo	
	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04	javacard.framework.Util.arrayCo	
	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F	javacard.framework.Util.arrayCo	
	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0	javacard.framework.Util.arrayCo	
	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h	javacard.framework.Util.arrayCo	
	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method	javacard.framework.Util.arrayCo mpare() is 00h	
	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays	javacard.framework.Util.arrayCompare() is 00h Result of	
	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method	javacard.framework.Util.arrayCompare() is 00h Result of javacard.framework.Util.arrayCo	
13	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays compareBuffer = 04 81 80 00 017F	javacard.framework.Util.arrayCompare() is 00h Result of	
	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays	javacard.framework.Util.arrayCompare() is 00h Result of javacard.framework.Util.arrayCo	
13	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays compareBuffer = 04 81 80 00 017F Clear the handler	javacard.framework.Util.arrayCompare() is 00h Result of javacard.framework.Util.arrayCo	
13	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays compareBuffer = 04 81 80 00 017F	javacard.framework.Util.arrayCompare() is 00h Result of javacard.framework.Util.arrayCo	
13	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays compareBuffer = 04 81 80 00 017F Clear the handler Successful call	javacard.framework.Util.arrayCompare() is 00h Result of javacard.framework.Util.arrayCo	
13	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays compareBuffer = 04 81 80 00 017F Clear the handler Successful call tag = 04	javacard.framework.Util.arrayCompare() is 00h Result of javacard.framework.Util.arrayCo	
13	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays compareBuffer = 04 81 80 00 017F Clear the handler Successful call tag = 04 value = 00 01 F9 valueOffset = 0 valueLength = 250	javacard.framework.Util.arrayCompare() is 00h Result of javacard.framework.Util.arrayCompare() is 00h	
13	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays compareBuffer = 04 81 80 00 017F Clear the handler Successful call tag = 04 value = 00 01 F9 valueOffset = 0	javacard.framework.Util.arrayCompare() is 00h Result of javacard.framework.Util.arrayCo	
13	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays compareBuffer = 04 81 80 00 017F Clear the handler Successful call tag = 04 value = 00 01 F9 valueOffset = 0 valueLength = 250 Call getLength() method	javacard.framework.Util.arrayCompare() is 00h Result of javacard.framework.Util.arrayCompare() is 00h	
13	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays compareBuffer = 04 81 80 00 017F Clear the handler Successful call tag = 04 value = 00 01 F9 valueOffset = 0 valueLength = 250	javacard.framework.Util.arrayCompare() is 00h Result of javacard.framework.Util.arrayCompare() is 00h	
13	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays compareBuffer = 04 81 80 00 017F Clear the handler Successful call tag = 04 value = 00 01 F9 valueOffset = 0 valueLength = 250 Call getLength() method	javacard.framework.Util.arrayCompare() is 00h Result of javacard.framework.Util.arrayCompare() is 00h	
13	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays compareBuffer = 04 81 80 00 017F Clear the handler Successful call tag = 04 value = 00 01 F9 valueOffset = 0 valueLength = 250 Call copy() method Call copy() method Call copy() method Call copy() method	javacard.framework.Util.arrayCompare() is 00h Result of javacard.framework.Util.arrayCompare() is 00h result = 253	
13	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays compareBuffer = 04 81 80 00 017F Clear the handler Successful call tag = 04 value = 00 01 F9 valueOffset = 0 valueLength = 250 Call copy() method Call copy() method	javacard.framework.Util.arrayCompare() is 00h Result of javacard.framework.Util.arrayCompare() is 00h result = 253	
13	tag = 01 value = 11 22 88 valueOffset = 2 valueLength = 4 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66 Clear the handler Successful call tag = 04 value = 00 01 7F valueOffset = 0 valueLength = 80h Call copy() method Compare the arrays compareBuffer = 04 81 80 00 017F Clear the handler Successful call tag = 04 value = 00 01 F9 valueOffset = 0 valueLength = 250 Call copy() method Call copy() method Call copy() method Call copy() method	javacard.framework.Util.arrayCompare() is 00h Result of javacard.framework.Util.arrayCompare() is 00h result = 253	

6.2.7.21.4 Test Coverage

CRR number	Test case number
N1	10, 11, 12, 13, 14
N2	9
P1	1
P2	2, 3, 4, 5, 6
C1	7
C2	Does not apply for
	Proactive Handler
C3	8

 6.2.7.22 Method appendTLV(byte tag, byte value1, byte[] value2, short value2offset, short value2length)

Test Area Reference: API_2_PAH_APTLBB_BSS

6.2.7.22.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

void appendTLV (byte tag,

byte value1
byte[] value2,
short value2offset,
short value2length)

throws java.lang.NullPointerException,

java.lang.ArrayIndexOutOfBoundsException,

ToolkitException

Normal execution

CRRN1: Appends a TLV element to the current TLV list (1 byte and a byte-array element).

CRRN2: A successful append does not modify the TLV selected.

Parameters error

CRRP1: if value2 is null, a java.lang.NullPointerException is thrown

CRRP2: if value2offset or value2length or both would cause access outside the array bounds, or if length is negative, a java.lang.ArrayIndexOutOfBoundsException is thrown.

Context errors

CRRC1: if the EditHandler buffer is too small to append the requested data, a ToolkitException is thrown with reason code HANDLER OVERFLOW

CRRC2: if the EditHandler buffer is busy, a ToolkitException is thrown with reason code HANDLER_NOT_AVAILABLE

CRRC3: if valuelength is greater than 255, a ToolkitException is thrown with reason code BAD_INPUT_PARAMETER

6.2.7.22.2 Test suite files

Test Script: API_2_PAH_APTLBB_BSS_1.scr

Test Applet: API_2_PAH_APTLBB_BSS_1.java

Load Script: API_2_PAH_APTLBB_BSS_1.ldr

Cleanup Script: API_2_PAH_APTLBB_BSS_1.clr

Test procedure 6.2.7.22.3

ld	Description	API Expectation	APDU Expectation
1	Null value2	NullPointerException is thrown	71 DO EXPOSICION
2	value2Offset > value2.length	ArrayIndexOutOfBoundsExceptio	
	value2.length = 5	n is thrown	
	value20ffset = 6		
3	value2Length = 0 value2Offset < 0	A manufactory of Of Davis da Eva antia	
3	value2.length = 5	ArrayIndexOutOfBoundsException is thrown	
	value20ffset = -1	II IS UIIOWII	
	value2Length = 1		
4	value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
	<pre>value2.length = 5 value20ffset = 0</pre>	n is thrown	
	value2Length = 6		
5	value2Offset + value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
	value2.length = 5	n is thrown	
	<pre>value20ffset = 3 value2Length = 3</pre>		
6	value2Length < 0	ArrayIndexOutOfBoundsExceptio	
"	value2.length = 5	n is thrown	
	value20ffset = 0		
<u> </u>	value2Length = -1		
7	Handler overflow value2.length = 254	ToolkitException.HANDLER_OV ERFLOW is thrown	
	value20ffset = 0	ERFLOW IS INFOWN	
	value2Length = 254		
8	Bad parameter	ToolkitException.BAD_INPUT_P	
	value2.length = 256	ARAMETER is thrown	
	<pre>value2Offset = 0 value2Length = 256</pre>		
9	Initialise handler		
	Select Command Details TLV		
	Successful call		
	tag = 04		
	value1 = 05 value2 = FF FE F8		
	value2Offset = 0		
	value2Length = 8		
	Verify Current TLV: Call getValueLength()	Result is 03h	
10	Clear the handler		
	Successful call		
	value1 = 05		
	value2 = FF FE F8		
	value20ffset = 0		
	value2Length = 8 Call copy() method		
	Can copy() method Compare the arrays	Result of	
	CompareBuffer = 04 09 05 FF FE F8	javacard.framework.Util.arrayCo	
		mpare() is 00h	
11	Successful call	i i	
	tag = 85h		
	value1 = 55h value2 = 00 01 07		
	value2Offset = 2		
	value2Length = 6		
	Call copy() method		
	Compare the arrays compareBuffer =	Result of	
	compareBuiler = 04 09 05 FF FE F8	javacard.framework.Util.arrayCo	
L	85 07 55 02 03 07	mpare() is 00h	
12	Successful call		
	tag = 01		
	value1 = 44h value2 = 11 22 88		
	value2Offset = 2		
	value2Length = 4		

	Call copy() method		
	Compare the arrays	Result of	
	CompareBuffer =	javacard.framework.Util.arrayCo	
	04 09 05 FF FE F8	mpare() is 00h	
	85 07 55 02 03 07		
	01 05 44 33 44 55 66		
13	Clear the handler		
	Successful call		
	tag = 04		
	value1 = 00		
	value2 = 01 7F		
	value2Offset = 0		
	value2Length = 7Fh		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 04 81 80 00 017F	javacard.framework.Util.arrayCo	
		mpare() is 00h	
14	Clear the handler		
	Successful call		
	tag = 04		
	value1 = 00		
	value2 = 01 F9		
	value20ffset = 0		
	value2Length = 249		
	Call getLength() method	result = 253	
	Call copy() method		
	Compare handler	Result of	
	compareBuffer = 04 81 FA 00 01F9	javacard.framework.Util.arrayCo	
	-	mpare() is 00h	

6.2.7.22.4 **Test Coverage**

CRR number	Test case number
N1	10, 11, 12, 13, 14
N2	9
P1	1
P2	2, 3, 4, 5, 6
C1	7
C2	Does not apply for
Proactive Handle	
C3	8

- 6.2.7.23 Method clear

Test Area Reference: API_2_PAH_CLER

6.2.7.23.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

void clear()
throws ToolkitException EditHandler

Normal execution

CRRN1: Clears the TLV list of an EditHandler

CRRN2: Resets the current TLV selected.

Parameters error

No requirements

Context errors

CRRC1: if the EditHandler buffer is busy, a ToolkitException is thrown with reason code HANDLER_NOT_AVAILABLE

6.2.7.23.2 Test suite files

Test Script: API_2_PAH_CLER_1.scr

Test Applet: API_2_PAH_CLER_1.java

Load Script: API_2_PAH_CLER_1.ldr

Cleanup Script: API_2_PAH_CLER_1.clr

Parameter File: API_2_PAH_CLER_1.par

6.2.7.23.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialise the handler	Result of getLength() is not null	
	Select Command Details TLV		
	Call the getLength() method		
	Clear the handler	Result of getLength() is 0	
	Call the getLength() method		
2	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown	

6.2.7.23.4 Test Coverage

CRR number	Test case number	
N1	1	
N2	2	
C1	Does not apply for	
	Proactive Handler	

6.2.8 Class ProactiveResponseHandler

6.2.8.1 Method copyAdditionalInformation

Test Area Reference: API_2_PRH_CPAI_BSS

6.2.8.1.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public short copyAdditionalInformation(byte[] dstBuffer,

short dstOffset,
short dstLength)

throws java.lang.NullPointerException,

 ${\tt java.lang.ArrayIndexOutOfBoundsException,}$

ToolkitException

Normal execution

CRRN1: The copyAdditionalInformation() method shall copy a part of the additional information field from Result TLV element in dstBuffer, using dstOffset and dstLength.

CRRN2: dstBuffer shall only be modified from <math>dstOffset to (dstOffset + dstLength - 1) (included).

CRRN3: The method returns (dstOffset + dstLength).

CRRN4: If a Result TLV element is available, it becomes the TLV selected after a call to the method.

CRRN5: The method shall copy from the first Result TLV.

Parameter errors

CRRP1: A NullPointerException shall be thrown if dstBuffer is null.

CRRP2: An ArrayIndexOutOfBoundsException shall be thrown if dstOffset or dstLength or both would cause access outside array bounds.

Context errors

CRRC1: A ToolkitException.UNAVAILABLE_ELEMENT shall be thrown in case of unavailable Result TLV element.

CRRC2: A ToolkitException.OUT_OF_TLV_BOUNDARIES shall be thrown if dstLength is greater than the value field of the available TLV.

6.2.8.1.2 Test Suite files

Test Script: API_2_PRH_CPAI_BSS_1.scr

Test Applet: API_2_PRH_CPAI_BSS-_1.java

Load Script: API_2_PRH_CPAI_BSS-_1.ldr

Cleanup Script: API_2_PRH_CPAI_BSS-_1.clr

Parameter File: API 2 PRH CPAI BSS 1.par

6.2.8.1.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
	qualifier = 0		command
	dcs = 4		
	buffer = "Text"		
	Terminal Response with 11 additional bytes		
	Result TLV = 03 0C 01 01 23 45 67 89 AB CD EF 01 23 45		
	NULL as parameter to dstBuffer dstBuffer = NULL	NullPointerException is thrown	
2	dstOffset > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 10	n is thrown	
	dstOffset = 11		
	dstLength = 0		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 10	n is thrown	
	dstOffset = -1		
4	dstLength = 1	A manufacture of the constitution of the const	
4	dstLength > dstBuffer.length dstBuffer.length = 10	ArrayIndexOutOfBoundsExceptio	
	dstOffset = 0	n is thrown	
	dstLength = 11		
5	dstOffset + dstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 10	n is thrown	
	dstOffset = 6		
	dstLength = 5		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 10	n is thrown	
	dstOffset = 6		
L	dstLength = -1		
7	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive

			command
	Terminal Response with 5 additional bytes		Command
	Result TLV = 03 06 01 01 23 45 67 89		
	Successfull call, dstBuffer is the whole buffer	result of	
	dstBuffer.length = 5	copyAdditionalInformation() is	
	<pre>dstOffset = 0 dstLength = 5</pre>	05h.	
8	Compare dstBuffer using arrayCompare()	result of arrayCompare() is 00h.	
	src = {01, 23, 45, 67, 89}		
	srcOffset = 00		
	dest = dstBuffer		
	<pre>destOffset = 0 length = 5</pre>		
9	Call the getValueLength() method	Result is 06h.	
10	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response with 6 additional bytes		Command
	Result TLV = 03 07 01 AB CD EF FE DC BA Successfull call, dstBuffer is part of a buffer	result of	
	dstBuffer.length = 7	copyAdditionalInformation() is	
	dstOffset = 2	07h.	
11	dstLength = 5 Compare dstBuffer using arrayCompare()	result of arrayCompare() is 00h.	
		l seam of array compare() to com	
	<pre>src = {AB, CD, EF, FE, DC} srcOffset = 00</pre>		
	dest = dstBuffer		
	<pre>destOffset = 2 length = 5</pre>		
12	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
			command
	Terminal Response with 7 additional bytes		
	Result TLV = 03 08 01 FE DC BA 98 76 54 32		
	Successfull call, dstBuffer is part of a buffer	result of	
	<pre>dstBuffer.length = 7 dstOffset = 0</pre>	copyAdditionalInformation() is 05h.	
	dstLength = 5		
13	Compare dstBuffer using arrayCompare() src = {FE, DC, BA, 98, 76}	result of arrayCompare() is 00h.	
	srcOffset = 00		
	<pre>dest = dstBuffer destOffset = 0</pre>		
	length = 5		
14	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response with 8 additional bytes		
	Result TLV = 03 09 01 00 11 22 33 44 55 66 77		
	Successfull call, dstBuffer is the whole buffer	result of	
	<pre>dstBuffer.length = 9 dstOffset = 2</pre>	copyAdditionalInformation() is	
	dstLength = 5	07h.	
15	Compare dstBuffer using arrayCompare()	result of arrayCompare() is 00h.	
	<pre>src = {00, 11, 22, 33, 44} srcOffset = 00</pre>		
	dest = dstBuffer		
	<pre>destOffset = 2 length = 5</pre>		
	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
16			command
16 ——	Terminal Response with F2h additional bytes		command

	Pogult TIV - 02 01 E2 01 00 01 00 02		1
	Result TLV = 03 81 F3 01 00 01 02 03 Successfull call to the method	result of	
	dstBuffer.length = F2h	copyAdditionalInformation() is	
	dstOffset = 0	F2h.	
	dstLength = F2h	F211.	
17	Compare dstBuffer using arrayCompare()	result of arrayCompare() is 00h.	
	src = {00, 01, 02, 03, 04}		
	<pre>srcOffset = 00 dest = dstBuffer</pre>		
	destOffset = 0		
	length = F2h		
18	Call the getValueLength() method	Result is F3h.	
19	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
			command
	Terminal Response with 5 additional bytes		
	Result TLV = 03 06 01 00 11 22 33 44		
	dett av ette i det e evelleble	OUT OF THE POLINIPARIES	
	<pre>dstLength > data available dstBuffer.length = 6</pre>	OUT_OF_TLV_BOUNDARIES	
	dstBuller.length = 6 dstOffset = 0	ToolkitException is thrown	
	dstLength = 6		
20	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
			command
	Terminal Response with 5 additional bytes		
	Result TLV = 03 06 01 00 11 22 33 44		
	Initialise dstBuffer		
	dstBuffer = {00h, 01h, 02h, 03h}		
	Call the copyAdditionalInformation() method dstBuffer.length = 20		
	dstOffset = 5		
	dstLength = 5		
	Compare dstBuffer using arrayCompare()	result of arrayCompare() is 00h	
	src = {		
	00h, 01h, 02h, 03h, 04h,		
	00h, 11h, 22h, 33h, 44h, 0Ah, 0Bh, 0Ch, 0Dh, 0Eh,		
	0Fh, 10h, 11h, 12h, 13h}		
	<pre>srcOffset = 0</pre>		
	dest = dstBuffer		
	destOffset = 0		
21	length = 20 Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
21	Build and Send a DISPLAT TEXT Command		command
	Terminal Response with 2 Result TLV		Command
	elements		
	olements.		
	1st Result TLV = 03 06 01 01 23 45 67 89		
	2nd Result TLV = 03 01 00		
	Successfull call to	result of	
	copyAdditionalInformation()	copyAdditionalInformation() is	
	<pre>dstBuffer.length = 5 dstOffset = 0</pre>	05h.	
	dstorrset = 0 dstLength = 5		
22	Compare dstBuffer using arrayCompare()	result of arrayCompare() is 00h.	
-			
	src = {01, 23, 45, 67, 89}		
	<pre>srcOffset = 00 dogt = dgtPuffor</pre>		
	<pre>dest = dstBuffer destOffset = 0</pre>		
	length = 5		
23	Call the getValueLength() method	Result is 06h.	
	3		
24	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
			command
			<u> </u>
	Terminal Response without Result Simple	ToolkitException.UNAVAILABLE	
	TLV	_ELEMENT is thrown by send()	

ProactiveResponseHandler, getTheHandler	ToolkitException.UNAVAILABLE	
call copyAdditionalInformation()	_ELEMENT is thrown	

6.2.8.1.4 Test Coverage

CRR number	Test case number	
N1	8, 11, 13, 15, 17, 20, 22	
N2	20	
N3	7, 10, 12, 14, 16, 21	
N4	9, 18, 23	
N5	21, 22, 23	
P1	1	
P2	2, 3, 4, 5, 6	
C1	24	
C2	19	

- 6.2.8.2 Method copyTextString

Test Area Reference: API_2_PRH_CPTS_BS

6.2.8.2.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

throws java.lang.NullPointerException,
java.lang.ArrayIndexOutOfBoundsException,
ToolkitException

Normal execution

CRRN1: The copyTextString() method copies the text string value from the first Text String TLV element, using dstBuffer and dstOffset.

CRRN2: If a Text String TLV element is available, it becomes the TLV selected.

CRRN3: The method returns (dstOffset + length of copied value).

Parameter errors

CRRP1: A NullPointerException shall be thrown if dstBuffer is null.

CRRP2: A ArrayIndexOutOfBoundsException shall be thrown if dstOffset or dstOffset + (length of the TextString to be copied, without the Data Coding Scheme included), as specified for the returned value, would cause access outside array bounds.

Context errors

CRRC1: A ToolkitException.UNAVAILABLE_ELEMENT shall be thrown in case of unavailable Text String TLV element.

6.2.8.2.2 Test Suite files

Test Script: API_2_PRH_CPTS_BS_1.scr

Test Applet: API_2_PRH_CPTS_BS_1.java

Load Script: API_2_PRH_CPTS_BS_1.ldr

Cleanup Script: API_2_PRH_CPTS_BS_1.clr

6.2.8.2.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Build and send a GET INPUT command		GET INPUT Proactive
	qualifier = 00h dcs = 04h		command
	buffer = 'Text'		
	minRespLength = 00h		
	maxRespLength = FFh Terminal Response		
	reminar Nesponse		
	Text String TLV = 0D 02 04 41		
	ProactiveResponseHandler.getTheHandler() ; call the copyTextString() method with a null dstBuffer	NullPointerException is thrown	
	dstBuffer = null dstOffset = 0		
2	Build and send a GET INPUT command		GET INPUT Proactive command Proactive
	Terminal Response		
	Text String TLV = 0D 04 04 "ABC"		
	dstOffset + text length > dstBuffer.length	ArrayIndexOutOfBoundsException	
	dstBuffer.length = 04h dstOffset = 02h	is thrown	
3	dstOffset < 0	ArrayIndexOutOfBoundsException	
	dstBuffer.length = 04h	is thrown	
4	dstoffset = -1 Build and send a DISPLAY TEXT command		DISPLAY TEXT
4	qualifier = 00h		Proactive command
	dcs = 04h		1 Todolivo communa
	buffer = 'Text' Terminal Response without Text String TLV		
	Terminal Response without Text String TEV		
	<pre>ProactiveResponseHandler.getTheHandler(); call the copyTextString() method</pre>	UNAVAILABLE_ELEMENT ToolkitException is thrown	
5	Build and send a GET INPUT command		GET INPUT Proactive command Proactive
	Terminal Response with a null Text String TLV		
	Text String TLV = 0D 00		
	Initialise dstBuffer		
	dstBuffer = {F00h, F01h, F02h, F03h}		
	Call the copyTextString() method	Result of copyTextString() is 02h	
	dstBuffer.length = 04h dstOffset = 02h		
6	Compare dstBuffer using arrayCompare()	Result of arrayCompare() is 00h	
	<pre>src = {0F0h, 0F1h, 0F2h, 0F3h} src0ffset = 00h dest = dstBuffer dest0ffset = 00h</pre>		
7	Build and send a GET INPUT command		GET INPUT Proactive command
			Proactive
	Terminal Response with text length = 01h		
	Text String TLV = 0D 02 04 41		
	<pre>Initialise dstBuffer dstBuffer = {00h, 01h, 02h, 03h}</pre>		

	Call the copyTextString() method	Result of copyTextString() is 01h	
	dstBuffer.length = 04h		
	dstOffset = 00h		
8	Compare dstBuffer using arrayCompare()	Result of arrayCompare() is 00h	
	src = {41h, 01h, 02h, 03h}		
	srcOffset = 00h		
	<pre>dest = dstBuffer destOffset = 00h</pre>		
	length = 04h		
9	Build and send a GET INPUT command		GET INPUT Proactive command Proactive
	Terminal Response with text length = 02h		
	Text String TLV = 0D 03 04 42 43		
	Initialise dstBuffer		
	dstBuffer = {00h, 01h, 02h, 03h} Call the copyTextString() method	Result of copyTextString() is 04h	
	can the copy rextotting() method	Result of copy rextotting() is 0411	
	dstBuffer.length = 04h		
10	dstOffset = 02h Compare dstBuffer using arrayCompare()	Result of arrayCompare() is 00h	
10		Result of arrayCompare() is oon	
	src = {00h, 01h, 42h, 43h}		
	<pre>srcOffset = 00h dest = dstBuffer</pre>		
	destOffset = 00h		
44	length = 04h	Describie 00h	
11	Call the getValueLength() method	Result is 03h	
12	Build and send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response with text length = 7Eh		
	Text String TLV = 0D 7F 04 01 02 7E		
	Initialise dstBuffer		
	dstBuffer = {00h, 00h 00h}		
	Call the copyTextString() method	Result of copyTextString() is 7Eh	
	dstBuffer.length = 7Eh		
40	dstOffset = 00h	Decult of array Carenagra () is only	
13	Compare dstBuffer using arrayCompare()	Result of arrayCompare() is 00h	
	src = {01h,, 7Eh}		
	<pre>srcOffset = 00h dest = dstBuffer</pre>		
	destOffset = 00h		
4.4	length = 7Eh	D 10: 7F1	
14	Call the getValueLength() method	Result is 7Fh	
15	Build and send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response with text length = 7Fh		
	Text String TLV = 0D 81 80 04 01 027F		
	Initialise dstBuffer		
	dstBuffer = {00h, 01h FFh}	Deput of construction of in CT	
	Call the copyTextString() method	Result of copyTextString() is 8Fh	
	dstBuffer.length = FFh		
16	dstOffset = 10h Compare dstBuffer using arrayCompare()	Result of arrayCompare() is 00h	
	<pre>src = {00h, 01h, 0Fh, 01h,7Fh, 8Fh, FFh}</pre>		
	srcOffset = 00h		
	<pre>dest = dstBuffer destOffset = 00h</pre>		
	length = FFh		
17			GET INPUT Proactive

			command
	Terminal Response with text length = EFh		
	Text String TLV = 0D 81 F0 04 01 02 EF Initialise dstBuffer		
	dstBuffer = {00h, 00h 00h}		
	Call the copyTextString() method	Result of copyTextString() is EFh	
	oan the copy textormig() method	Tresuit of copy rextotring() is El II	
	dstBuffer.length = FFh		
	dstOffset = 00h		
18	Compare dstBuffer using arrayCompare()	Result of arrayCompare() is 00h	
	src = {01h,EFh, 00h 00h }		
	src = {UII,EFI, UUII UUII } srcOffset = 00h		
	dest = dstBuffer		
	destOffset = 00h		
	length = FFh		
19	Build and send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response with two Text String TLV		
	1st Text String TLV = 0D 03 04 42 43		
	2nd Text String TLV = 0D 02 04 44		
	Initialise dstBuffer		
	dstBuffer = {00h, 01h, 02h, 03h}		
	Call the copyTextString() method	Result of copyTextString() is 04h	
	July Duffery January 0.4h		
	dstBuffer.length = 04h dstOffset = 02h		
20	Compare dstBuffer using arrayCompare()	Result of arrayCompare() is 00h	
	compare detailer deinig array compare()	Trobait of array compare() is con	
	$src = \{00h, 01h, 42h, 43h\}$		
	<pre>srcOffset = 00h</pre>		
	dest = dstBuffer		
	destOffset = 00h length = 04h		
21	Call the getValueLength() method	Result is 03h	
	Jan in gottalasanging montou		
			I

6.2.8.2.4 Test Coverage

CRR number	Test case number
N1	6, 8, 10, 13, 16, 18, 20
N2	11, 14, 21
N3	5, 7, 9, 12, 15, 17, 19
P1	1
P2	2, 3
C1	4

- 6.2.8.3 Method getAdditionalInformationLength

Test Area Reference: API_2_PRH_GTIL

6.2.8.3.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: This method returns the length of the additional information field from the first Result TLV in the ProactiveResponseHandler.

CRRN2: After a successful execution of the method, the Result TLV becomes the selected TLV of the ProactiveResponseHandler.

Parameter errors

No requirements

Context errors

CRRC1: A ToolkitException.UNAVAILABLE_ELEMENT shall be thrown in case of unavailable Result TLV element.

6.2.8.3.2 Test Suite files

Test Script: API_2_PRH_GTIL_1.scr

Test Applet: API_2_PRH_GTIL_1.java

Load Script: API_2_PRH_GTIL_1.ldr

Cleanup Script: API_2_PRH_GTIL_1.clr

Parameter File: API 2 PRH GTIL 1.par

6.2.8.3.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
	qualifier = 00h		command
	dcs = 04h		
	buffer = 'Text' Terminal Response without additional		
	information		
	ProactiveResponseHandler.getTheHandler(); call the getAdditionalInformationLength() method	Result is 00h	
2	Call the getValueLength() method	Result is 01h	
3	Build and send a DISPLAY TEXT command		DISPLAY TEXT ProactiveProactive command
	Terminal Response with 1 additional byte		
	Result TLV = 03 02 02 55		
	ProactiveResponseHandler.getTheHandler(); call the getAdditionalInformationLength() method	Result is 01h	
4	Call the getValueLength() method	Result is 02h	
5	Build and send a DISPLAY TEXT command		DISPLAY TEXT ProactiveProactive command
	Terminal Response with 7Eh additional bytes		
	Result TLV = 03 7F 02 55 55 55		
	ProactiveResponseHandler.getTheHandler(); call the getAdditionalInformationLength() method	Result is 7Eh	
6	Call the getValueLength() method	Result is 7Fh	
7	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response with 7Fh additional bytes		
	Result TLV = 03 81 80 02 55 55 55		
	ProactiveResponseHandler.getTheHandler(); call the getAdditionalInformationLength() method	Result is 7Fh	
l			

8	Call the getValueLength() method	Result is 80h	
9	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response with 80h additional bytes		
	Result TLV = 03 81 81 02 55 55 55		
	ProactiveResponseHandler.getTheHandler(); call the getAdditionalInformationLength() method	Result is 80h	
10	Call the getValueLength() method	Result is 81h	
11	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response with F2h additional bytes		
	Result TLV = 03 81 F3 02 55 55 55		
	ProactiveResponseHandler.getTheHandler(); call the getAdditionalInformationLength() method	Result is F2h	
12	Call the getValueLength() method	Result is F3h	
13	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response with 2 Result TLV		
	1st Result TLV = 03 03 02 01 23 2nd Result TLV = 03 01 00		
	ProactiveResponseHandler.getTheHandler(); call the getAdditionalInformationLength() method	Result is 02h	
14	Call the getValueLength() method	Result is 03h	
15	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response without Result Simple TLV	ToolkitException.UNAVAILABLE_E LEMENT is thrown by send()	
	Get ProactiveResponseHandler		
	Call the getAdditionalInformationLength() method	ToolkitException.UNAVAILABLE_E LEMENT is thrown by getAdditionalInformationLength ()	

6.2.8.3.4 **Test Coverage**

CRR number	Test case number
N1	1, 3, 5, 7, 9, 11, 13
N2	2, 4, 6, 8, 10, 12, 14
C1	15

6.2.8.4 Method getGeneralResult

Test Area Reference: API_2_PRH_GTGR

6.2.8.4.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: This method returns the general result of a proactive command.

CRRN2: After a successful execution of the method, the Result TLV becomes the selected TLV of the ProactiveResponseHandler.

Parameter errors

No requirements

Context errors

CRRC1: A ToolkitException.UNAVAILABLE_ELEMENT shall be thrown in case of unavailable Result TLV element.

CRRC2: A ToolkitException.OUT_OF_TLV_BOUNDARIES shall be thrown if the general result byte is missing in the Result Simple TLV.

6.2.8.4.2 Test Suite files

Test Script: API_2_PRH_GTGR_1.scr

Test Applet: API_2_PRH_GTGR_1.java

Load Script: API_2_PRH_GTGR_1.ldr

Cleanup Script: API_2_PRH_GTGR_1.clr

Parameter File: API 2 PRH GTGR 1.par

6.2.8.4.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
	qualifier = 00h		command
	dcs = 04h buffer = 'Text'		
	Terminal Response with General Result = 00 (command performed successfully)		
	ProactiveResponseHandler.getTheHandler()	Described matConsersIDescrib() is 00h	
	Call the getGeneralResult() method	Result of getGeneralResult() is 00h	
2	Call the getValueLength() method	Result is 01h	
3	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response with General Result = 01,		
	without Additional information on result (command performed with partial comprehension)		
	ProactiveResponseHandler.getTheHandler() Call the getGeneralResult() method	Result of getGeneralResult() is 01h	
4	Call the getValueLength() method	Result is 01h	
5	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response with General Result = 01, with Additional information on result Result TLV = 03 02 01 55 (command performed with partial comprehension)		
	ProactiveResponseHandler.getTheHandler()	Result of getGeneralResult() is 01h	
	Call the getGeneralResult() method	Troodit of gotoonorali roodit() is offi	
6	Call the getValueLength() method	Result is 02h	
7	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive

			command
	Terminal Response with General Result = 02		
	Result TLV = 03 04 02 65 43 21 (Missing information)		
	ProactiveResponseHandler.getTheHandler() Call the getGeneralResult() method	Result of getGeneralResult() is 02h	
8	Call the getValueLength() method	Result is 04h	
9	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response with 7Fh additional bytes		
	Result TLV = 03 81 80 02 55 55 55		
	ProactiveResponseHandler.getTheHandler(); call the getGeneralResult() method	Result is 02h	
10	Call the getValueLength() method	Result is 80h	
11	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response with 2 Result TLV		
	1st Result TLV = 03 02 02 12 2nd Result TLV = 03 03 03 34 56		
	<pre>ProactiveResponseHandler.getTheHandler(); call the getGeneralResult() method</pre>	Result is 02h	
12	Call the getValueLength() method	Result is 02h	
13	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response without Result Simple TLV	ToolkitException.UNAVAILABLE_E LEMENT is thrown by send()	
	ProactiveResponseHandler.getTheHandler(); call the getGeneralResult() method	UNAVAILABLE_ELEMENT ToolkitException is thrown	
14	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response without General Result Byte in Result Simple TLV	ToolkitException.UNAVAILABLE_E LEMENT is thrown by send()	
	<pre>ProactiveResponseHandler.getTheHandler(); call the getGeneralResult() method</pre>	OUT_OF_TLV_BOUNDARIES ToolkitException is thrown	
	Result TLV = 03 00		

6.2.8.4.4 Test Coverage

CRR number	Test case number
N1	1, 3, 5, 7, 9, 11
N2	2, 4, 6, 8, 10, 12
C1	13
C2	14

6.2.8.5 Method getItemIdentifier

Test Area Reference: API_2_PRH_GTII

6.2.8.5.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public byte getItemIdentifier()
throws ToolkitException

Normal execution

CRRN1: The method returns the item identifier byte value from the first Item Identifier TLV element.

CRRN2: If an Item Identifier TLV element is available, it becomes the TLV selected.

Parameter errors

No requirements

Context errors

CRRC1: A ToolkitException.UNAVAILABLE_ELEMENT shall be thrown in case of unavailable Item Identifier TLV element.

CRRC2: A ToolkitException.OUT_OF_TLV_BOUNDARIES shall be thrown if the item identifier byte is missing in the Item Identifier Simple TLV.

Test Suite files 6.2.8.5.2

Test Script: API_2_PRH_GTII_1.scr

Test Applet: API_2_PRH_GTII_1.java

Load Script: API_2_PRH_GTII_1.ldr

Cleanup Script: API_2_PRH_GTII_1.clr

Parameter File: API 2 PRH GTII 1.par

6.2.8.5.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Build and send a DISPLAY TEXT command	·	DISPLAY TEXT Proactive command
	Terminal Response (no Item Identifier TLV available)		
	Call to getItemIdentifier() with unavailable Item Identifier TLV	UNAVAILABLE_ELEMENT ToolkitException is thrown	
2	Build and send a SELECT ITEM command with 2 items (ID=01, 02)		SELECT ITEM Proactive command
	Terminal Response with Item 1 selected		
	Item Identifier TLV = 10 01 01		
	Call the getItemIdentifier() method	Result is 01h	
3	Call the getValueByte() method valueOffset = 00h	Result is 01h	
4	Build and send a SELECT ITEM command with 3 items (ID=03, 05, 07)		SELECT ITEM Proactive command

	Terminal Response with Item 5 selected		
	Tommar Response with Rom o Science		
	Item Identifier TLV = 10 01 05		
	Call the getItemIdentifier() method	Result is 05h	
5	Call the getValueByte() method	Result is 05h	
	valueOffset = 00h		
6	Build and send a SELECT ITEM command with 3 items (ID=FDh, FEh, FFh)		SELECT ITEM Proactive command
	Terminal Response with Item FFh selected		
	Item Identifier TLV = 10 01 FF		
	Call the getItemIdentifier() method	Result is FFh	
7	Call the getValueByte() method	Result is FFh	
	valueOffset = 00h		
8	Build and send a SELECT ITEM command with 3 items (ID=FDh, FEh, FFh)		SELECT ITEM Proactive command
	Terminal Response with 2 Item Identifier TLV		
	1st Item Identifier TLV = 10 01 FFh		
	2nd Item Identifier TLV = 10 01 FEh		
	Call the getItemIdentifier() method	Result is FFh	
9	Call the getValueByte() method valueOffset = 00h	Result is FFh	
10	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response without item identifier in the Item Identifier Simple TLV		
	Item Identifier TLV = 10 00	OUT OF THE POLINDARIES	
	Call to getItemIdentifier()	OUT_OF_TLV_BOUNDARIES ToolkitException is thrown	

6.2.8.5.4 **Test Coverage**

CRR number	Test case number
N1	2, 4, 6, 8
N2	3, 5, 7, 9
C1	1
C2	10

6.2.8.6 Method getTextStringCodingScheme

Test Area Reference: API_2_PRH_GTCS

6.2.8.6.1 Conformance requirement

The method with following header shall be compliant to its definition in the API. public byte getTextStringCodingScheme()

throws ToolkitException

Normal execution

CRRN1: This method returns the data coding scheme from the first Text String TLV element.

CRRN2: If a Text String TLV element is available, it becomes the TLV selected.

Parameter errors

No requirements

Context errors

CRRC1: A ToolkitException.UNAVAILABLE_ELEMENT shall be thrown in case of unavailable Text String TLV element.

CRRC2: A ToolkitException.OUT_OF_TLV_BOUNDARIES shall be thrown if the Text String TLV is present with a length of 0.

6.2.8.6.2 Test Suite files

Test Script: API_2_PRH_GTCS_1.scr

Test Applet: API_2_PRH_GTCS_1.java

Load Script: API_2_PRH_GTCS_1.ldr

Cleanup Script: API_2_PRH_GTCS_1.clr

Parameter File: API 2 PRH GTCS 1.par

6.2.8.6.3 Test procedure

	Description	API Expectation	APDU Expectation
	Build and send a DISPLAY TEXT command	AFI Expectation	DISPLAY TEXT Proactive
	dilu aliu seliu a Displati Text collillaliu		command
			Communa
	Terminal Response (no Text String TLV		
	element available)		
	·		
0	Call to getTextStringCodingScheme() with	UNAVAILABLE_ELEMENT	
	unavailable Text String TLV	ToolkitException is thrown	
2	Build and send a GET INPUT command		GET INPUT Proactive
			command
Tor	rminal Response with a null Text String TLV		+
161	minal Nesponse with a null Text String TEV		
Tex	kt String TLV = 0D 00		
	Call the getTextStringCodingScheme()	OUT_OF_TLV_BOUNDARIES	
	method	ToolkitException is thrown	
3	Build and send a GET INPUT command		GET INPUT Proactive
			command
Tou	minal Dagmanas with tout lawath. Odb		
	rminal Response with text length = 01h, DCS		
	7111		
	kt String TLV = 0D 02 04 "A"		
Cal	II the getTextStringCodingScheme() method	Result is 04h	
4	Call the getValueLength() method	Result is 02h	
5	Build and send a GET INPUT command		GET INPUT Proactive
5	Build and Serid a GET INPUT Command		command
			Command
Т	Ferminal Response with text length = 02h,		
	DCS = 00h		
Tex	xt String TLV = 0D 03 00 "BB"	B. It is and	
	Call the getTextStringCodingScheme()	Result is 00h	
	method		
6	Call the getValueLength() method	Result is 03h	+
	Jan the getvaluetengin() method	Tresuit is USII	
7	Build and send a GET INPUT command		GET INPUT Proactive
			command

	Terminal Response with text length = 7Eh,		
	DCS = 08h		
	Text String TLV = 0D 7F 08 01 02 7E		
	Call the getTextStringCodingScheme()	Result is 08h	
	method		
	Call the matter and the death and	D 1: 7E	
8	Call the getValueLength() method	Result is 7Fh	
9	Build and send a GET INPUT command		GET INPUT Proactive command
	Terminal Response with text length = 7Fh,		
	DCS = 04h		
	Text String TLV = 0D 81 80 04 01 02 7F		
	Call the getTextStringCodingScheme()	Result is 04h	
	method		
10	Call the getValueLength() method	Result is 80h	
. •	our are germanalism, memori		
11	Build and send a GET INPUT command		GET INPUT Proactive command
	Terminal Response with text length = EFh, DCS = 08h		
	Text String TLV = 0D 81 F0 08 01 02 EE EF		
	Call the getTextStringCodingScheme() method	Result is 08h	
12	Call the getValueLength() method	Result is F0h	
13	Build and send a GET INPUT command		GET INPUT Proactive command
	Terminal Response with 2 Text String TLV		
	1st Text String TLV = 0D 02 04 41 2nd Text String TLV = 0D 03 08 42 43		
	0.11.41	Result is 04h	
	Call the getTextStringCodingScheme() method	Troodic to o m	

6.2.8.6.4 Test Coverage

CRR number	Test case number
N1	3, 5, 7, 9, 11, 13
N2	4, 6, 8, 10, 12, 14
C1	1
C2	2

- 6.2.8.7 Method GetTextStringLength

Test Area Reference: API $_2$ PRH $_G$ TTL

6.2.8.7.1 Conformance requirement

The method with following header shall be compliant to its definition in the API. public short getTextStringLength()

throws ToolkitException

Normal execution

CRRN1: The getTextStringLength() method returns the text string length value from the first Text String TLV element.

CRRN2: If a Text String TLV element is available, it becomes the TLV selected.

Parameter errors

No requirements

Context errors

CRRC1: A ToolkitException.UNAVAILABLE_ELEMENT shall be thrown in case of unavailable Text String TLV element.

6.2.8.7.2 Test Suite files

Test Script: API_2_PRH_GTTL_1.scr

Test Applet: API_2_PRH_GTTL_1.java

Load Script: API_2_PRH_GTTL_1.ldr

Cleanup Script: API_2_PRH_GTTL_1.clr

Parameter File: API 2 PRH GTTL 1.par

6.2.8.7.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response (no Text String TLV element available)		
	Call to getTextStringLength() with unavailable Text String TLV	UNAVAILABLE_ELEMENT ToolkitException is thrown	
2	Build and send a GET INPUT command		GET INPUT Proactive command
	Terminal Response with a null Text String TLV Text String TLV = 0D 00		
	Call the getTextStringLength() method	Result is 00h	
3	Call the getValueLength() method	Result is 00h	
4	Build and send a GET INPUT command		GET INPUT Proactive command
	Terminal Response with text length = 01h, DCS = 04h Text String TLV = 0D 02 04 "A"		
	Call the getTextStringLength() method	Result is 01h	
5	Call the getValueLength() method	Result is 02h	
6	Build and send a GET INPUT command		GET INPUT Proactive command
	Terminal Response with text length = 02h,		

	DCS = 00h		
	Text String TLV = 0D 03 00 "BB"		
	Call the getTextStringLength() method	Result is 02h	
7	Call the getValueLength() method	Result is 03h	
8	Build and send a GET INPUT command		GET INPUT Proactive command
	Terminal Response with text length = 7Eh, DCS = 08h Text String TLV = 0D 7F 08 01 02 7E		
	Call the getTextStringLength() method	Result is 7Eh	
9	Call the getValueLength() method	Result is 7Fh	
10	Build and send a GET INPUT command		GET INPUT Proactive command
	Terminal Response with text length = 7Fh, DCS = 04h Text String TLV = 0D 81 80 04 01 02 7F		
	Call the getTextStringLength() method	Result is 7Fh	
11	Call the getValueLength() method	Result is 80h	
12	Build and send a GET INPUT command		GET INPUT Proactive command
	Terminal Response with text length = EFh, DCS = 04h		
	Text String TLV = 0D 81 F0 04 01 02 EE EF		
	Call the getTextStringLength() method	Result is EFh	
13	Call the getValueLength() method	Result is F0h	
14	Build and send a GET INPUT command		GET INPUT Proactive command
	Terminal Response with 2 Text String TLV 1st Text String TLV = 0D 02 04 41 2nd Text String TLV = 0D 03 08 42 43		
	Call the getTextStringLength() method	Result is 01h	
15	Call the getValueLength() method	Result is 02h	

6.2.8.7.4 Test Coverage

CRR number	Test case number
1	2, 4, 6, 8, 10, 12, 14
2	3, 5, 7, 9, 11, 13, 15
3	1

- 6.2.8.8 Method getTheHandler

Test Area Reference: API_2_PRH_GTHD
6.2.8.8.1 Conformance requirement

The method with following header shall be compliant to its definition in the API. public static ProactiveResponseHandler getTheHandler()

throws ToolkitException

Normal execution

CRRN1: The method shall return the single system instance of the ProactiveHandler class.

CRRN2: The EnvelopeHandler is a Temporary JCRE Entry Point Object

Parameter errors

No requirements

Context errors

CRRC1: The method shall throw ToolkitException.HANDLER_NOT_AVAILABLE if the handler is busy.

6.2.8.8.2 Test Suite files

Test Script: API_2_PRH_GTHD_1.scr

Test Applet: API_2_PRH_GTHD_1.java

Load Script: API_2_PRH_GTHD_1.ldr

Cleanup Script: API_2_PRH_GTHD_1.clr

Parameter File: API_2_PRH_GTHD_1.par

6.2.8.8.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Build and send a Proactive Command		Proactive Command
	Terminal Response		
	getTheHandler() twice	The returned objects shall be the	
		same	
2	getTheHandler()	The reference shall be a	
		ProactiveResponseHandler	
3	getTheHandler()	The reference shall not be null	
	- -		

6.2.8.8.4 Test Coverage

CRR number	Test case number
N1	1, 2, 3
N2	To be checked in
	Framework tests and
	insert here cross
	reference
C1	To be checked in
	Framework tests and
	insert here cross
	reference

- 6.2.8.9 Method getLength

Test Area Reference API_2_PRH_GLEN

6.2.8.9.1 Conformance requirement

The method with following header shall be compliant to its definition in the API. public short getLength()

throws ToolkitException

Normal execution

CRRN1: returns the length in bytes of the TLV list.

Parameter errors

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException.HANDLER_NOT_AVAILABLE.

6.2.8.9.2 Test Suite files

Test Script: API_2_PRH_GLEN_1.scr

Test Applet: API_2_PRH_GLEN_1.java

Load Script: API_2_PRH_GLEN_1.ldr

Cleanup Script: API_2_PRH_GLEN_1.clr

Parameter File: API 2 PRH GLEN 1.par

6.2.8.9.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Build and send a Display Text command		DISPLAY TEXT Proactive command
	Terminal Response without additional information in General Result TLV		001111111111
	ProactiveResponseHandler.getTheHandler() getLength()	Result of getLength() is 12	
2	Build and send a Display Text command		DISPLAY TEXT Proactive command
	Terminal Response with F2h additional		
	information in General Result TLV		
	ProactiveResponseHandler.getTheHandler() getLength()	Result of getLength() is FFh	

6.2.8.9.4 Test Coverage

CRR number	Test case number	
N1	1, 2	
C1	Does not apply for	
Proactive Respons		
	Handler	

6.2.8.10 Method copy

Test Area Reference API_2_PRH_COPY_BSS

6.2.8.10.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

throws java.lang.NullPointerException,

java.lang.ArrayIndexOutOfBoundsException,

 ${\tt ToolkitException}$

Normal execution

CRRN1: copies the simple TLV list contained in the handler to the destination byte array.

CRRN2: returns dstOffset + dstLength.

Parameter errors

CRRP1: if dstBuffer is null a NullPointerException is thrown.

CRRP2: if dstOffset or dstLength or both would cause access outside array bounds, or if dstLength is negative, an ArrayIndexOutOfBoundsException is thrown.

CRRP3: if dstLength is grater than the length of the simple TLV List, an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException. OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.8.10.2 Test Suite files

Test Script: API_2_PRH_COPY_BSS_1.scr

Test Applet: API_2_PRH_COPY_BSS_1.java

Load Script: API_2_PRH_COPY_BSS_1.ldr

Cleanup Script: API_2_PRH_COPY_BSS_1.clr

Parameter File: API_2_PRH_COPY_BSS_1.par

6.2.8.10.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Send a DISPLAY TEXT command		DISPLAY TEXT Proactive
			command
	Terminal Response without Additional		
	Information in General Result TLV:		
	81 03 01 21 00 02 02 82 81 03 01 00		
	ProactiveResponseHandler.getTheHandler()	NullPointerException is thrown	
	copy() with NULL as parameter to dstBuffer		
2	dstOffset > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 6		
	dstLength = 0		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = -1		
	dstLength = 1	1 1 1 0 10/0	
4	dstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>dstBuffer.length = 5 dstOffset = 0</pre>	n is thrown	
	dstOffset = 0 dstLength = 6		
5	dstOffset + dstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
5	dstBuffer.length = 5	n is thrown	
	dstOffset = 3	II IS UIIOWII	
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 0		
	dstLength = -1		

7	dstLength > length of the simple TLV list	ToolkitException.OUT_OF_TLV_	
	dstBuffer.length = 13	BOUNDARIES is thrown	
	dstOffset = 0		
	dstLength = 13		
8	Successful call, dstBuffer is the whole buffer	Result of copy() is 12	
	dstBuffer.length = 12		
	dstOffset = 0		
	dstLength = 12	D 1: (0 0 : 0	
9	Compare the buffer with buffer:	Result of arrayCompare() is 0	
	81 03 01 21 00 02 02 82 81 03 01 00		
10	Successful call, dstBuffer is part of a buffer	Result of copy() is 15	
	dstBuffer.length = 20		
	dstOffset = 3		
11	dstLength = 12	Decult of arrayCompare() is 0	_
''	Compare the whole buffer	Result of arrayCompare() is 0	
	00 01 02		
	81 03 01 21 00		
	02 02 82 81		
	03 01 00		
	OF 10 11 12 13		
12	Initialize dstBuffer		
	dstBuffer = 00h 01h 02h 13h		
	Successful call, dstBuffer is part of a buffer	Result of copy() is 12	
	dstBuffer.length = 20		
	dstOffset = 3		
	dstLength = 9		
13	Compare the whole buffer	Result of arrayCompare() is 0	
	Reference =		
	00 01 02		
	81 03 01 21 00 02 02 82 81		
	02 02 82 81 0C 0D 0E		
	0F 10 11 12 13		
	01. 10 11 12 13		

6.2.8.10.4 Test Coverage

CRR number	Test case number	
N1	9, 11, 13	
N2	8, 10, 12	
P1	1	
P2	2, 3, 4, 5, 6	
P3	7	
C1	Does not apply for	
	Proactive Response	
	Handler	

- 6.2.8.11 Method findTLV

Test Area Reference API_2_PRH_FINDBB

6.2.8.11.1 Conformance requirement

The method with following header shall be compliant to its definition in the API. public byte findTLV(byte tag, byte occurrence)

throws ToolkitException

Normal execution

Looks for the indicated occurrence of a TLV element from the beginning of the TLV list (handler buffer):

CRRN1: the method is successful if the required occurrence exists then the corresponding TLV becomes current.

CRRN2: if the method is successful then it returns TLV_FOUND_CR_SET when Comprehension Required flag is set.

CRRN3: if the method is successful then it returns TLV_FOUND_CR_NOT_SET when Comprehension Required flag is not set.

CRRN4: if the required occurrence of the TLV element does not exist, the current TLV is no longer defined and TLV_NOT_FOUND is returned.

CRRN5: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if an input parameter is not valid (e.g. occurrence = 0) an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException BAD_INPUT_PARAMETER.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.8.11.2 Test Suite files

Test Script: API_2_PRH_FINDBB_1.scr
Test Applet: API_2_PRH_FINDBB_1.java
Load Script: API_2_PRH_FINDBB_1.ldr
Cleanup Script: API_2_PRH_FINDBB_1.clr

Parameter File: API 2 PRH FINDBB 1.par

6.2.8.11.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Send a DISPLAY TEXT command		DISPLAY TEXT Proactive
			command
	Terminal Response with 2 General Result TLV		
	81 03 01 21 00		
	82 02 82 81		
	03 01 00		
	03 02 01 12		
	findTLV() with Invalid input parameter	ToolkitException.BAD_INPUT_P	
	occurrence = 0	ARAMETER is thrown	
2	Search 1st TLV	Result is TLV_FOUND_CR_SET	
	tag = 01h		
3	occurrence = 1	Result is 03h	
	Call the getValueLength() method		
4	Search 2nd TLV	Result is TLV_FOUND_CR_SET	
	tag = 02h occurrence = 1		
5		Result is 02h	
	Call the getValueLength() method	Result is 0211	
6	Select a TLV (tag 02h)	Describis TIV NOT FOUND	
	Search a wrong tag	Result is TLV_NOT_FOUND	
	cag = 04n occurrence = 1		
7	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
'	Can the getvalueLength() method	ELEMENT shall be thrown	
8	Search a tag with wrong occurrence	Result is TLV_NOT_FOUND	
0	tag = 01h	Result is TEV_NOT_FOUND	
	occurrence = 2		
9	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
3	oan the getvalue congulty method	ELEMENT shall be thrown.	
10	Search 3rd TLV	Result is	
10	tag = 03h	TLV_FOUND_CR_NOT_SET	
	occurrence = 1	ITATEONINT CKTINO 1 2E I	
11	Call the getValueLength() method	Result is 01h	
1 '''	Jan the getvalueLength() method	I NOSUR IS UTIL	I

12	Search 3rd TLV	Result is	
	tag = 03h	TLV_FOUND_CR_NOT_SET	
	occurrence = 2		
13	Call the getValueLength() method	Result is 02h	
14	Search tag 83h	Result is	
	Tag = 83h	TLV_FOUND_CR_NOT_SET	
	Occurrence = 1		
15	Search tag 82h	Result is TLV_FOUND_CR_SET	
	Tag = 82h		
	Occurrence = 1		

6.2.8.11.4 Test Coverage

CRR number	Test case number
N1	3, 5, 11, 13
N2	2, 4
N3	10, 12
N4	6, 7,8, 9
N5	14,15
P1	1
C1	Does not apply for
	Proactive Response
	Handler

- 6.2.8.12 Method getValueLength

Test Area Reference API_2_PRH_GVLE

6.2.8.12.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public short getValueLength()

throws ToolkitException

Normal execution

CRRN1: gets and returns the binary length of the value field for the last TLV element which has been found in the handler.

Parameter errors

No requirements

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.8.12.2 Test Suite files

Test Script: API_2_PRH_GVLE_1.scr

Test Applet: API_2_PRH_GVLE_1.java

Load Script: API_2_PRH_GVLE_1.ldr

Cleanup Script: API_2_PRH_GVLE_1.clr

6.2.8.12.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response		
	Text String TLV = 0D 00		
	ProactiveResponseHandler.getTheHandler()	ToolkitException.UNAVAILABLE	
	GetValueLength()	_ELEMENT is thrown	
2	Search TLV 0Dh		
	getValueLength()	Result is 00h	
3	Send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response		
	Text String TLV = 0D 02 04 41		
	Search TLV 0Dh (Text String TLV)		
	getValueLength()	Result is 02h	
4	Send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response, Text String length = 7Eh		
	Text String TLV = 0D 7F 04 01 02 7E		
	Search TLV 0Dh (Text String TLV)		
	getValueLength()	Result is 7Fh	
5	Send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response, Text String length = 7Fh		
	Text String TLV = 0D 81 80 04 01 02 7E		
	Search TLV 0Dh (Text String TLV)		
	getValueLength()	Result is 80h	
6	Send a GET INPUT command		GET INPUT Proactive
О	Send a GET INFOT Command		command
	Terminal Response, Text String length = EFh		
	Text String TLV = 0D 81 F0 04 01 02 EF		
	Search TLV 0Dh (Text String TLV)		
	getValueLength()	Result is F0h	

6.2.8.12.4 Test Coverage

CRR number	Test case number	
N1	2, 3, 4, 5, 6	
C1	Does not apply for	
	Proactive Response	
	Handler	
C2	1	

- 6.2.8.13 Method getValueByte

Test Area Reference API_2_PRH_GVBYS

6.2.8.13.1 Conformance requirement

The method with following header shall be compliant to its definition in the API. public byte $getValueByte(short\ valueOffset)$ throws ToolkitException

Normal execution

CRRN1: Gets a byte from the last TLV element which has been found in the handler and returns its value (1 byte).

Parameter errors

CRRP1: if valueOffset is out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.8.13.2 Test Suite files

Test Script: API_2_PRH_GVBYS_1.scr

Test Applet: API_2_PRH_GVBYS_1.java

Load Script: API_2_PRH_GVBYS_1.ldr

Cleanup Script: API_2_PRH_GVBYS_1.clr

Parameter File: API 2 PRH GVBYS 1.par

6.2.8.13.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Send a GET INPUT command		GET INPUT Proactive command
	Terminal Response, Text String length = 7Eh Text String TLV = 0D 7F 04 01 02 7E		
	ProactiveResponseHandler.getTheHandler()		
	<pre>getValueByte(0)</pre>	ToolkitException.UNAVAILABLE _ELEMENT is thrown	
2	Search TLV 01h (Command Details TLV)		
	getValueByte(3)	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
3	Search TLV 01h (Command Details TLV)		
	getValueByte(2)	Result is 00h (qualifier)	
4	Search TLV 02h (Device Identities TLV)		
	getValueByte(0)	Result is 82h (Source)	
5	Search TLV 0Dh (Text String TLV)		
	getValueByte(7E)	Result is 7Eh	
6	Send a GET INPUT command		GET INPUT Proactive command
	Terminal Response, Text String length = EFh Text String TLV = 0D 81 F0 04 01 02 7E 7F EF		
	Search TLV 0Dh (Text String TLV)		
	getValueByte(7E)	Result is 7Eh	
7	GetValueByte(7F)	Result is 7Fh	
8	GetValueByte(EF)	Result is EFh	

6.2.8.13.4 Test Coverage

CRR number	Test case number
N1	3, 4, 5, 6, 7, 8
P1	2
C1	Does not apply for
	Proactive Response
	Handler
C2	1

- 6.2.8.14 Method copyValue

Test Area Reference API_2_PRH_CPYVS_BSS

6.2.8.14.1 Conformance requirement

The method with following header shall be compliant with its definition in the API.

Normal execution

CRRN1: copies a part of the last TLV element which has been found, into a destination. buffer.

CRRN2: returns dstOffset + dstLength.

Parameter errors

CRRP1: if dstBuffer is null NullPointerException is thrown.

CRRP2: if dstOffset or dstLength or both would cause access outside array bounds, or if dstLength is negative ArrayIndexOutOfBoundsException is thrown.

CRRP3: if valueOffset, dstLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.8.14.2 Test Suite files

Test Script: API_2_PRH_CPYVS_BSS_1.scr
Test Applet: API_2_PRH_CPYVS_BSS_1.java
Load Script: API_2_PRH_CPYVS_BSS_1.ldr
Cleanup Script: API_2_PRH_CPYVS_BSS_1.clr
Parameter File: API_2_PRH_CPYVS_BSS_1.par

6.2.8.14.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Send a GET INPUT command	ATTEXPEDIATION	GET INPUT Proactive
			command
	Terminal Response, Text String length = 5		
	Text String TLV = 0D 06 04 01 02 05 ProactiveResponseHandler.getTheHandler()		
	Select Text String TLV		
	CopyValue() with a null dstBuffer	NullPointerException is thrown	
2	dstOffset > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	<pre>dstOffset = 6 dstLength = 0</pre>		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	<pre>dstOffset = -1 dstLength = 1</pre>		
4	dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	<pre>dstOffset = 0 dstLength = 6</pre>		
5	dstOffset + dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	<pre>dstOffset = 3 dstLength = 3</pre>		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	<pre>dstOffset = 0 dstLength = -1</pre>		
	ustheligth1		
7	valueOffset > Text String Length	ToolkitException.OUT_OF_TLV_	
	<pre>valueOffset = 7 dstBuffer.length = 15</pre>	BOUNDARIES is thrown	
	dstOffset = 0		
	dstLength = 0		
8	<pre>valueOffset < 0 valueOffset = -1</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
	dstBuffer.length = 15	BOONDARIES IS IIIIOWII	
	dstOffset = 0		
9	dstLength = 1 dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
3	valueOffset = 0	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	<pre>dstOffset = 0 dstLength = 7</pre>		
10	ValueOffset + dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
	<pre>ValueOffset = 2 DstBuffer.length = 15</pre>	BOUNDARIES is thrown	
	DstBuller.length = 15 DstOffset = 0		
	DstLength = 5		
11	Send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F		
	ProactiveResponseHandler.getTheHandler		
	CopyValue()	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown	
12	Select Text String TLV	Deput of part / stres / 1- 47	
	Successful call ValueOffset = 0	Result of copyValue() is 17	
	DstBuffer.length = 17		
	DstOffset = 0		
13	DstLength = 17 Compare buffer	Result is 00h	
	Buffer = 04 00 01 0F	. 130411 10 0011	
4.4	initially a Lab #		
14	initialise dstBuffer dstBuffer = 55 55 55		
	GDCDGIIGI = 33 33 33	I	1

	Successful call	Result of copyValue() is 15	
	ValueOffset = 2	·	
	DstBuffer.length = 20		
	DstOffset = 3		
	DstLength = 12		
15	Compare buffer	Result is 00h	
	Buffer =		
	55 55 55 01 02		
	03 04 05 06 07		
	08 09 0A 0B 0C		
	55 55 55 55		

6.2.8.14.4 Test Coverage

CRR number	Test case number
N1	13, 15
N2	12, 14
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
C1	Does not apply for
	Proactive Response
	Handler
C2	11

- 6.2.8.15 Method compareValue

Test Area Reference API_2_PRH_CPRVS_BSS

6.2.8.15.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

Normal execution

Compares the last found TLV element with a buffer:

CRRN1: returns 0 if identical.

CRRN2: returns -1 if the first miscomparing byte in simple TLV List is less than that in compareBuffer.

CRRN3: returns 1 if the first miscomparing byte in simple TLV List is greater than that in compareBuffer.

Parameter errors

CRRP1: if compareBuffer is null NullPointerException shall be thrown.

CRRP2: if compareOffset or compareLength or both would cause access outside array bounds, or if compareLength is negative ArrayIndexOutOfBoundsException shall be thrown.

CRRP3: if valueOffset, dstLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

CRRC2: in case of unavailable TLV element an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException UNAVAILABLE_ELEMENT.

6.2.8.15.2 Test Suite files

Test Script: API_2_PRH_CPRVS_BSS_1.scr

Test Applet: API_2_PRH_CPRVS_BSS_1.java

Load Script: API_2_PRH_CPRVS_BSS_1.ldr

Cleanup Script: API_2_PRH_CPRVS_BSS_1.clr

Parameter File: API 2 PRH CPRVS BSS 1.par

6.2.8.15.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Send a GET INPUT command	·	GET INPUT Proactive
			command
	Terminal Response, Text String length = 5		
	Text String TLV = 0D 06 04 01 02 05		
	ProactiveResponseHandler.getTheHandler()		
	Select Text String TLV		
	compareValue() with a null compareBuffer	NullPointerException is thrown	
2	compareOffset > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 5	n is thrown	
	compareOffset = 6		
	compareLength = 0		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 5	n is thrown	
	<pre>compareOffset = -1 compareLength = 1</pre>		
4	compareLength >compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
7	compareEngth > compareBuffer.length = 5	n is thrown	
	compareOffset = 0	II IS UIIOWII	
	compareLength = 6		
5	compareOffset + compareLength	ArrayIndexOutOfBoundsExceptio	
	>compareBuffer.length	n is thrown	
	compareBuffer.length = 5		
	compareOffset = 3		
	compareLength = 3		
6	compareLength < 0	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 5	n is thrown	
	compareOffset = 0		
	compareLength = -1		
7	valueOffset > Text String Length	ToolkitException.OUT_OF_TLV_	
'	valueOffset = 7	BOUNDARIES is thrown	
	compareBuffer.length = 15	BOONDAKIES IS IIIIOWII	
	compareOffset = 0		
	compareLength = 0		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	valueOffset = -1	BOUNDARIES is thrown	
	compareBuffer.length = 15		
	compareOffset = 0		
_	compareLength = 1 compareLength > Text String length	ToolkitEveention OUT OF TIV	
9	valueOffset = 0	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
	compareBuffer.length = 15	DOUNDAKIES IS INFOWN	
	compareOffset = 0		
	compareLength = 7		
10	valueOffset + compareLength > Text String	ToolkitException.OUT_OF_TLV_	
	i man i seri rempunezangun rem eu mig	_ : : - : - : - : - : - : - : - :	

	length	BOUNDARIES is thrown	<u> </u>
	valueOffset = 2	BOONDAINES IS IIIIOWII	
	<pre>compareBuffer.length = 15</pre>		
	compareOffset = 0		
	compareLength = 5		
11	Send a GET INPUT command		GET INPUT Proactive
11	Send a GET INPUT command		command
	Terminal Response, Text String length = 16		Command
	Text String TLV = 0D 11 04 00 01 0F		
	ProactiveResponseHandler.getTheHandler()		
	CompareValue()	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown	
12	Select Text String TLV		
	Initialise compareBuffer		
	CompareBuffer =		
	O4 00 01 0F Compare buffers	Result is 00h	
	ValueOffset = 0	1.03uit is oon	
	CompareOffset = 0		
	CompareLength = 17		
40	Initialiae agree Doffee	-	
13	Initialise compareBuffer CompareBuffer =		
	04 00 01 10		
	Compare buffers with same parameters	Result is -1	
14	Initialise compareBuffer		
	CompareBuffer =		
	03 00 01 0F	Deculties of	
	Compare buffers with same parameters	Result is +1	
15	Initialise compareBuffer		
	CompareBuffer =		
	55 55 55 01 02		
	03 04 05 06 07 08 09 0A 0B 0C		
	55 55 55 55 55		
	Compare buffers	Result is 00h	
	ValueOffset = 2		
	CompareOffset = 3		
	CompareLength = 12		
16	Initialise compareBuffer		
.0	CompareBuffer =		
	55 55 55 02 01		
	03 04 05 06 07		
	08 09 0A 0B 0C 55 55 55 55 55		
	Compare buffers with same parameters	Result is -1	
	,		
17	Initialise compareBuffer		
	CompareBuffer =		
	55 55 55 01 02 03 04 05 06 07		
	08 09 0A 0A 0D		
	55 55 55 55		
	Compare buffers with same parameters	Result is +1	

6.2.8.15.4 **Test Coverage**

CRR number	Test case number
N1	12, 15
N2	13, 16
N3	14, 17
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
C1	Does not apply for
	Proactive Response
	Handler
C2	11

6.2.8.16 Method findAndCopyValue(byte tag, byte[] dstBuffer, short valueOffset)

Test Area Reference API_2_PRH_FACYB_BS

6.2.8.16.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public short findAndCopyValue(byte tag, byte[] dstBuffer,

short dstOffset)

java.lang.NullPointerException,

java.lang.ArrayIndexOutOfBoundsException,

ToolkitException

Normal execution

CRRN1: looks for the first occurrence of a TLV element from the beginning of a TLV list and copy its value into a destination buffer.

CRRN2: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN3: if the method is successful then the corresponding TLV becomes current and dstOffset + length of the copied value is returned.

CRRN4: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if dstBuffer is null NullPointerException shall be thrown.

CRRP2: if dstOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.8.16.2 Test Suite files

Test Script: API_2_PRH_FACYB_BS_1.scr

Test Applet: API_2_PRH_FACYB_BS_1.java

Load Script: API_2_PRH_FACYB_BS_1.ldr

Cleanup Script: API_2_PRH_FACYB_BS_1.clr

6.2.8.16.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Send a GET INPUT command		GET INPUT Proactive command
	Terminal Response, Text String length = 15 Text String TLV = 0D 10 04 01 02 0F		
	ProactiveResponseHandler.getTheHandler()		
	FindAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	<pre>dstOffset > dstBuffer.length tag = 0Dh dstBuffer.length = 20 dstOffset = 21</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
3	<pre>dstOffset < 0 dstBuffer.length = 20 dstOffset = -1</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
4	length > dstBuffer.length dstBuffer.length = 15 dstOffset = 0	ArrayIndexOutOfBoundsException is thrown	
5	<pre>dstOffset + length >dstBuffer.length dstBuffer.length = 20 dstOffset = 5</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
6	Send a GET INPUT command		GET INPUT Proactive command
	Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F		
	ProactiveResponseHandler.getTheHandler()		
	Select a TLV (tag 02h)		
	findAndCopyValue() tag = 04h	ToolkitException.UNAVAILABLE _ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE _ELEMENT is thrown.	
7	Successful call Tag = 0Dh DstBuffer.length = 17 DstOffset = 0	Result of findAndcopyValue() is 17	
8	Compare buffer Buffer = 04 00 01 0F	Result is 00h	
9	initialise dstBuffer dstBuffer = 55 55 55		
	Successful call DstBuffer.length = 20 DstOffset = 2	Result of findAndcopyValue() is 19	
10	Compare buffer Buffer = 55 55 04 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F 55	Result is 00h	
11	Send a GET INPUT command		GET INPUT Proactive
	Terminal Response, with 2 Text String TLV		command
	0D 11 04 00 01 0F 0D 02 04 41		
	ProactiveResponseHandler.getTheHandler()		
	Successful call Tag = 0Dh DstBuffer.length = 17 DstOffset = 0	Result of findAndcopyValue() is 17	
12	Compare buffer Buffer = 04 00 01 0F	Result is 00h	
13	Send a GET INPUT command		GET INPUT Proactive
		1	command

	Terminal Response, Text String length = 16		
	Text String TLV = 0D 11 04 00 01 0F		
	ProactiveResponseHandler.getTheHandler()		
	Successful call (with tag 8Dh)	Result of findAndcopyValue() is	
	Tag = 8Dh	17	
	DstBuffer.length = 17		
	DstOffset = 0		
14	Compare buffer	Result is 00h	_
	Buffer = 04 00 01 0F		

6.2.8.16.4 Test Coverage

CRR number	Test case number
N1	8, 10, 12
N2	6
N3	7, 9, 11
N4	13, 14
P1	1
P2	2, 3, 4, 5
C1	Does not apply for
	Proactive Response
	Handler

 6.2.8.17 Method findAndCopyValue(byte tag, byte occurence, short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength)

Test Area Reference API_2_PRH_FACYBBS_BSS

6.2.8.17.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public short findAndCopyValue(byte tag,

byte occurence,
short valueOffset,
byte[] dstBuffer,
short dstOffset,
short dstLength)

throws java.lang.NullPointerException,

java.lang.ArrayIndexOutOfBoundsException,

ToolkitException

Normal execution

CRRN1: looks for the indicated occurrence of a TLV element from the beginning of a TLV list and copy its value into a destination buffer.

CRRN2: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN3: if the method is successful then the corresponding TLV becomes current and dstOffset + dstLength is returned.

CRRN4: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if dstBuffer is null NullPointerException shall be thrown.

CRRP2: if dstOffset or dstLength or both would cause access outside array bounds, or if dstLength is negative ArrayIndexOutOfBoundsException shall be thrown.

CRRP3: if valueOffset, dstLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.8.17.2 Test Suite files

Test Script: API_2_PRH_FACYBBS_BSS_1.scr

Test Applet: API_2_PRH_FACYBBS_BSS_1.java

Load Script: API_2_PRH_FACYBBS_BSS_1.ldr

Cleanup Script: API_2_PRH_FACYBBS_BSS_1.clr

Parameter File: API 2 PRH FACYBBS BSS 1.par

6.2.8.17.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Send a GET INPUT command	-	GET INPUT Proactive
			command
	Terminal Response, Text String length = 15		
	Text String TLV = 0D 10 04 01 02 0F		
	ProactiveResponseHandler.getTheHandler()		
	findAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	dstOffset > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	tag = 0Dh, occurrence = 1	n is thrown	
	valueOffset = 0		
	<pre>dstBuffer.length = 5 dstOffset = 6</pre>		
	dstUngth = 0		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = -1		
	dstLength = 1		
4	dstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	<pre>dstOffset = 0 dstLength = 6</pre>		
5	dstOffset + dstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 3	I i i i i i i i i i i i i i i i i i i i	
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	<pre>dstOffset = 0 dstLength = -1</pre>		
	uschength1		
7	Send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response, Text String length = 5		
	Text String TLV = 0D 06 04 01 02 05		
	ProactiveResponseHandler.getTheHandler()	Tablite continue OUT OF TIV	
	<pre>valueOffset > Text String Length tag = 0Dh, occurrence = 1</pre>	ToolkitException.OUT_OF_TLV_	
	tag = UDn, occurrence = 1 valueOffset = 7	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 0		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	valueOffset = -1	BOUNDARIES is thrown	
	dstBuffer.length = 15		

	dstOffset = 0		1
	dstUriset = 0		
9	dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
	valueOffset = 0	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	<pre>dstOffset = 0 dstLength = 7</pre>		
10	valueOffset + dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
	valueOffset = 2	BOUNDARIES is thrown	
	dstBuffer.length = 15	BOOT VER WILL O TO WITHOWN	
	dstOffset = 0		
	dstLength = 5		
11	Send a GET INPUT command		GET INPUT Proactive
11	Send a GET INPOT Command		command
	Terminal Response, Text String length = 16		Command
	Text String TLV = 0D 11 04 00 01 0F		
	ProactiveResponseHandler.getTheHandler()		
	Select a TLV (tag 02h)		
	findAndCopyValue()	ToolkitException.UNAVAILABLE	
	tag = 0Dh	ELEMENT is thrown	
	occurrence = 2		
	Call the getValueLength() method	ToolkitException.UNAVAILABLE _ELEMENT is thrown.	
12	Successful call	Result of findAndCopyValue() is	
	Tag = 0Dh, occurrence = 1	17	
	ValueOffset = 0		
	DstBuffer.length = 17		
	DstOffset = 0 DstLength = 17		
13	Compare buffer	Result is 00h	
10	Buffer = 04 00 01 0F	Troodit to dott	
14	initialise dstBuffer		
	dstBuffer = 55 55 55		
	Successful call	Result of findAndcopyValue() is	
	Tag = 0Dh, occurrence = 1	15	
	ValueOffset = 2		
	DstBuffer.length = 20 DstOffset = 3		
	DstLength = 12		
15	Compare buffer	Result is 00h	
	Buffer =		
	55 55 55 01 02 03 04 05 06 07		
	08 09 0A 0B 0C		
	55 55 55 55 55		
16			
	Send a GET INPUT command		GET INPUT Proactive
			GET INPUT Proactive command
	Terminal Response, with 2 Text String TLV		
	Terminal Response, with 2 Text String TLV		
	Terminal Response, with 2 Text String TLV OD 11 04 00 01 02 OF OD 06 00 11 22 33 44 55 (no specific DCS byte)		
	Terminal Response, with 2 Text String TLV OD 11 04 00 01 02 OF OD 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler()		
	Terminal Response, with 2 Text String TLV OD 11 04 00 01 02 OF OD 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler() Successful call	Result of findAndCopyValue() is	
	Terminal Response, with 2 Text String TLV OD 11 04 00 01 02 OF OD 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler() Successful call Tag = ODh, occurrence = 1	Result of findAndCopyValue() is 17	
	Terminal Response, with 2 Text String TLV 0D 11 04 00 01 02 0F 0D 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler() Successful call Tag = 0Dh, occurrence = 1 ValueOffset = 0		
	Terminal Response, with 2 Text String TLV OD 11 04 00 01 02 OF OD 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler() Successful call Tag = ODh, occurrence = 1		
	Terminal Response, with 2 Text String TLV 0D 11 04 00 01 02 0F 0D 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler() Successful call Tag = 0Dh, occurrence = 1 ValueOffset = 0 DstBuffer.length = 17 DstOffset = 0 DstLength = 17	17	
17	Terminal Response, with 2 Text String TLV 0D 11 04 00 01 02 0F 0D 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler() Successful call Tag = 0Dh, occurrence = 1 ValueOffset = 0 DstBuffer.length = 17 DstOffset = 0 DstLength = 17 Compare buffer		
17	Terminal Response, with 2 Text String TLV 0D 11 04 00 01 02 0F 0D 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler() Successful call Tag = 0Dh, occurrence = 1 ValueOffset = 0 DstBuffer.length = 17 DstOffset = 0 DstLength = 17	17	
	Terminal Response, with 2 Text String TLV 0D 11 04 00 01 02 0F 0D 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler() Successful call Tag = 0Dh, occurrence = 1 ValueOffset = 0 DstBuffer.length = 17 DstOffset = 0 DstLength = 17 Compare buffer Buffer = 04 00 01 0F	Result is 00h	
17	Terminal Response, with 2 Text String TLV 0D 11 04 00 01 02 0F 0D 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler() Successful call Tag = 0Dh, occurrence = 1 ValueOffset = 0 DstBuffer.length = 17 DstOffset = 0 DstLength = 17 Compare buffer Buffer = 04 00 01 0F Successful call	Result is 00h Result of findAndCopyValue() is	
	Terminal Response, with 2 Text String TLV 0D 11 04 00 01 02 0F 0D 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler() Successful call Tag = 0Dh, occurrence = 1 ValueOffset = 0 DstBuffer.length = 17 DstOffset = 0 DstLength = 17 Compare buffer Buffer = 04 00 01 0F Successful call Tag = 0Dh, occurrence = 2	Result is 00h	
	Terminal Response, with 2 Text String TLV 0D 11 04 00 01 02 0F 0D 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler() Successful call Tag = 0Dh, occurrence = 1 ValueOffset = 0 DstBuffer.length = 17 DstOffset = 0 DstLength = 17 Compare buffer Buffer = 04 00 01 0F Successful call Tag = 0Dh, occurrence = 2 ValueOffset = 0	Result is 00h Result of findAndCopyValue() is	
	Terminal Response, with 2 Text String TLV 0D 11 04 00 01 02 0F 0D 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler() Successful call Tag = 0Dh, occurrence = 1 ValueOffset = 0 DstBuffer.length = 17 DstOffset = 0 DstLength = 17 Compare buffer Buffer = 04 00 01 0F Successful call Tag = 0Dh, occurrence = 2	Result is 00h Result of findAndCopyValue() is	
	Terminal Response, with 2 Text String TLV 0D 11 04 00 01 02 0F 0D 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler() Successful call Tag = 0Dh, occurrence = 1 ValueOffset = 0 DstBuffer.length = 17 DstOffset = 0 DstLength = 17 Compare buffer Buffer = 04 00 01 0F Successful call Tag = 0Dh, occurrence = 2 ValueOffset = 0 DstBuffer.length = 6	Result is 00h Result of findAndCopyValue() is 6	
	Terminal Response, with 2 Text String TLV 0D 11 04 00 01 02 0F 0D 06 00 11 22 33 44 55 (no specific DCS byte) ProactiveResponseHandler.getTheHandler() Successful call Tag = 0Dh, occurrence = 1 ValueOffset = 0 DstBuffer.length = 17 Dstoffset = 0 DstLength = 17 Compare buffer Buffer = 04 00 01 0F Successful call Tag = 0Dh, occurrence = 2 ValueOffset = 0 DstBuffer.length = 6 DstBuffer.length = 6 DstDoffset = 0	Result is 00h Result of findAndCopyValue() is	

20	Send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response, Text String length = 16		
	Text String TLV = 0D 11 04 00 01 0F		
	ProactiveResponseHandler.getTheHandler()		
	Successful call (with tag 8Dh)	Result of findAndcopyValue() is	
	Tag = 8Dh, occurrence = 1	17	
	ValueOffset = 0		
	DstBuffer.length = 17		
	DstOffset = 0		
	DstLength = 17		
21	Compare buffer	Result is 00h	
	Buffer = 04 00 01 0F		

6.2.8.17.4 Test Coverage

CRR number	Test case number
N1	13, 15, 17, 19
N2	11
N3	12, 14, 16, 18
N4	20, 21
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
C1	Does not apply for
	Proactive Response
	Handler

6.2.8.18 Method findAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset)

Test Area Reference API_2_PRH_FACRB_BS

6.2.8.18.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public byte findAndCompareValue(byte tag,

Normal execution

Looks for the first occurrence of a TLV element from beginning of a TLV list and compare its value with a buffer:

CRRN1: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN2: if the method is successful then the corresponding TLV becomes current.

CRRN3: if identical returns 0.

CRRN4: if the first miscomparing byte in simple TLV is less than that in compareBuffer returns -1.

CRRN5: if the first miscomparing byte in simple TLV is greater than that in compareBuffer returns 1.

CRRN6: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if compareBuffer is null NullPointerException shall be thrown.

CRRP2: if compareOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.8.18.2 Test Suite files

Test Script: API_2_PRH_FACRB_BS_1.scr

Test Applet: API_2_PRH_FACRB_BS_1.java

Load Script: API_2_PRH_FACRB_BS_1.ldr

Cleanup Script: API_2_PRH_FACRB_BS_1.clr

Parameter File: API_2_PRH_FACRB_BS_1.par

6.2.8.18.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Send a GET INPUT command	•	GET INPUT Proactive
			command
	Terminal Response, Text String length = 15		
	Text String TLV = 0D 10 04 01 02 0F		
	ProactiveResponseHandler.getTheHandler()		
	FindAndCompareValue() with a null dstBuffer	NullPointerException is thrown	
2	compareOffset > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	tag = 0Dh	n is thrown	
	<pre>compareBuffer.length = 20 compareOffset = 21</pre>		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 20	n is thrown	
4	compareOffset = -1 length > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
4	compareBuffer.length = 15	n is thrown	
	compareOffset = 0	II is unown	
5	CompareOffset + length >	ArrayIndexOutOfBoundsExceptio	
-	compareBuffer.length	n is thrown	
	CompareBuffer.length = 20		
	CompareOffset = 5		
6	Send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response, Text String length = 16		
	Text String TLV = 0D 11 04 00 01 0F		
	ProactiveResponseHandler.getTheHandler()		
	Select a TLV (tag 02h)		
	findAndCompareValue()	ToolkitException.UNAVAILABLE	
	tag = 04h	_ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
		_ELEMENT is thrown.	
7	Initialise compareBuffer		
	CompareBuffer =		
	04 00 01 0F	Deput is 00h	
	Compare buffers Tag = 0Dh	Result is 00h	
	CompareOffset = 0		
8	Verify current TLV	Result is 17	
U	Tomy ountile 121	1 COURT TO 17	

9	GetValueLength() Initialise compareBuffer		
9			
	CompareBuffer =		
	04 00 01 10		
	Compare buffers with same parameters	Result is -1	
10	Initialise compareBuffer		
	CompareBuffer =		
	03 00 01 0F		
	Compare buffers with same parameters	Result is +1	
11	Initialise compareBuffer		
• •	CompareBuffer =		
	55 55 04 00 01		
	02 03 04 05 06		
	07 08 09 0A 0B		
	OC OD OE OF 55		
	Compare buffers	Result is 00h	
	CompareOffset = 2		
40	Court of CET INDUT		OFT INDUT D
12	Send a GET INPUT command		GET INPUT Proactive
	T		command
	Terminal Response, with 2 Text String TLV		
	0D 11 04 00 01 0F		
	0D 06 00 11 22 33 44 55		
	ProactiveResponseHandler.getTheHandler()		
	Initialise compareBuffer		
	CompareBuffer =		
	55 55 04 00 01		
	02 03 04 05 06		
	07 08 09 0A 0B		
	OC OD OE OF 55	DIt i- 00b	
	Compare buffers	Result is 00h	
	CompareOffset = 2		
13	Initialise compareBuffer		
	CompareBuffer =		
	55 55 04 01 01		
	02 03 04 05 06		
	07 08 09 0A 0B		
	OC OD OE OF 55		
	Compare buffers	Result is -1	
	CompareOffset = 2		
14	Initialise compareBuffer		
	CompareBuffer =		
	55 55 04 00 01		
	02 03 04 05 06		
	07 08 09 0A 0B		
	0C 0D 0D 10 55		
	Compare buffers CompareOffset = 2	Result is +1	
15	Send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F		
	ProactiveResponseHandler.getTheHandler()		
	Initialise compareBuffer		
	CompareBuffer =		
	04 00 01 OF	B. ki ool	
		Result is 00h	

6.2.8.18.4 Test Coverage

CRR number	Test case number
N1	6
N2	8
N3	7, 11, 12
N4	9, 13
N5	10, 14
N6	15
P1	1
P2	2, 3, 4, 5
C1	Does not apply for
	Proactive Response Handler

 6.2.8.19 Method findAndCompareValue(byte tag, byte occurence, short valueOffset, byte[] compareBuffer, short compareOffset, short compareLength)

Test Area Reference API_2_PRH_FACRBBS_BSS

6.2.8.19.1 Conformance requirement

The method with following header shall be compliant to its definition in the API.

public byte findAndCompareValue(byte tag,

byte occurence,
short valueOffset,
byte[] compareBuffer,
short compareOffset,
short compareLength)

throws java.lang.NullPointerException,

java.lang.ArrayIndexOutOfBoundsException,

 ${\tt ToolkitException}$

Normal execution

Looks for the indicated occurrence of a TLV element from the beginning of a TLV list and compare its value with a buffer:

CRRN1: if no TLV element is found, the UNAVAILABLE_ELEMENT exception is thrown and the current TLV is no longer defined.

CRRN2: if the method is successful then the corresponding TLV becomes current.

CRRN3: if identical 0 is returned.

CRRN4: if the first miscomparing byte in simple TLV is less than that in compareBuffer -1 is returned.

CRRN5: if the first miscomparing byte in simple TLV is greater than that in compareBuffer 1 is returned

CRRN6: The search method is comprehension required flag independent.

Parameter errors

CRRP1: if compareBuffer is null NullPointerException shall be thrown.

CRRP2: if compareOffset or compareLength or both would cause access outside array bounds, or if compareLength is negative ArrayIndexOutOfBoundsException shall be thrown.

CRRP3: if valueOffset, compareLength or both are out of the current TLV an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException OUT_OF_TLV_BOUNDARIES.

CRRP4: if an input parameter is not valid (e.g. occurence = 0) an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException BAD_INPUT_PARAMETER.

Context errors

CRRC1: if the handler is busy an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException HANDLER_NOT_AVAILABLE.

6.2.8.19.2 Test Suite files

Test Script: API_2_PRH_FACRBBS_BSS_1.scr

Test Applet: API_2_PRH_FACRBBS_BSS_1.java

Load Script: API_2_PRH_FACRBBS_BSS_1.ldr

Cleanup Script: API_2_PRH_FACRBBS_BSS_1.clr

Parameter File: API 2 PRH FACRBBS BSS 1.par

6.2.8.19.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response, Text String length = 15		
	Text String TLV = 0D 10 04 01 02 0F		
	ProactiveResponseHandler.getTheHandler()		
	findAndCompareValue() with a null	NullPointerException is thrown	
	compareBuffer		
2	compareOffset > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	tag = 0Dh, occurrence = 1	n is thrown	
	valueOffset = 0		
	compareBuffer.length = 5		
	compareOffset = 6		
	compareLength = 0		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 5	n is thrown	
	compareOffset = -1		
	compareLength = 1	A d- d O+O d- F d- F	
4	compareLength >compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>compareBuffer.length = 5 compareOffset = 0</pre>	n is thrown	
	compareLength = 6		
5	CompareOffset + compareLength	ArrayIndexOutOfBoundsExceptio	
	>compareBuffer.length	n is thrown	
	CompareBuffer.length = 5	II IS UII OWII	
	CompareOffset = 3		
	CompareLength = 3		
6	compareLength < 0	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 5	n is thrown	
	compareOffset = 0		
	compareLength = -1		
	Court of CET INDUT of the court of		OFT INDUIT Describes
7	Send a GET INPUT command		GET INPUT Proactive
	Tamainal Bassassa Taut Otsina langth F		command
	Terminal Response, Text String length = 5		
	Text String TLV = 0D 06 04 01 02 05		
	ProactiveResponseHandler.getTheHandler()	T 11:15 (1 OUT OF TIME	
	valueOffset ≥ Text String Length	ToolkitException.OUT_OF_TLV_	
	tag = 0Dh, occurrence = 1	BOUNDARIES is thrown	
	<pre>valueOffset = 7 compareBuffer.length = 15</pre>		
	compareOffset = 0		
	compareLength = 0		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	valueOffset = -1	Toomitexooption.oo _or _rev_	
	14143011330 - 1	J.	I

	<pre>compareBuffer.length = 15 compareOffset = 0</pre>	BOUNDARIES is thrown	
9	compareLength = 1 compareLength > Text String length valueOffset = 0	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
	<pre>compareBuffer.length = 15 compareOffset = 0 compareLength = 7</pre>		
10	valueOffset + compareLength > Text String length valueOffset = 2	ToolkitException.OUT_OF_TLV_BOUNDARIES is thrown	
	<pre>compareBuffer.length = 15 compareOffset = 0 compareLength = 5</pre>		
11	Invalid parameter Occurrence = 0	ToolkitException.BAD_INPUT_P ARAMETER is thrown	
12	Send a GET INPUT command		GET INPUT Proactive command
	Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F		
	ProactiveResponseHandler.getTheHandler()		
	Select a TLV (tag 02h)		
	<pre>findAndCompareValue() tag = 0Dh occurrence = 2</pre>	ToolkitException.UNAVAILABLE _ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE _ELEMENT is thrown.	
13	Initialise compareBuffer CompareBuffer = 04 00 01 0F		
	<pre>findAndCompareValue() tag = 0Dh, occurrence = 1 valueOffset = 0</pre>	Result is 00h	
	<pre>compareOffset = 0 compareLength = 17</pre>		
14	Verify current TLV GetValueLength()	Result is 17	
15	Initialise compareBuffer compareBuffer = 04 00 01 10		
	Compare buffers with same parameters	Result is -1	
16	Initialise compareBuffer compareBuffer = 03 00 01 0F		
	Compare buffers with same parameters	Result is +1	
17	Initialise compareBuffer compareBuffer = 55 55 55 01 02		
	03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55		
	Compare buffers valueOffset = 2 compareOffset = 3 compareLength = 12	Result is 00h	
18	Initialise compareBuffer compareBuffer = 55 55 55 02 01 03 04 05 06 07		
	08 09 0A 0B 0C 55 55 55 55 55		
	Compare buffers with same parameters	Result is -1	
19	Initialise compareBuffer		

	<pre>compareBuffer =</pre>		
	55 55 55 01 02		
	03 04 05 06 07		
	08 09 0A 0A 0D		
	55 55 55 55		
	Compare buffers with same parameters	Result is +1	
	Compare barrers with same parameters	result is 11	
20	Send a GET INPUT command		GET INPUT Proactive
20	Selia a GET INPOT Command		
			command
	Terminal Response, with 2 Text String TLV		
	OD 11 04 00 01 OF		
	OD 06 00 11 22 33 44 55		
	ProactiveResponseHandler.getTheHandler()		
	Initialise compareBuffer		
	<pre>compareBuffer =</pre>		
	04 00 01 OF		
	findAndCompareValue()	Result is 00h	
	tag = 0Dh, occurrence = 1		
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 17		
	Comparedengen = 17		
04	Initialiae commono Duffen		
21	Initialise compareBuffer		
	compareBuffer =		
	00 11 22 33 44 55		
	findAndCompareValue()	Result is 00h	
	tag = 0Dh, occurrence = 2		
	<pre>valueOffset = 0</pre>		
	<pre>compareOffset = 0</pre>		
	compareLength = 6		
22	Initialise compareBuffer		
	compareBuffer =		
	00 11 22 33 44 66		
	findAndCompareValue()	Result is -1	
	tag = 0Dh, occurrence = 2	Result is -1	
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 6		
23	Send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response, Text String length = 16		
	Text String TLV = 0D 11 04 00 01 0F		
	ProactiveResponseHandler.getTheHandler()		
	Initialise compareBuffer		
	CompareBuffer =		
	04 00 01 OF		
		D 11: 001	
	Compare buffers (with tag 8Dh)	Result is 00h	
	tag = 8Dh, occurrence = 1		
	<pre>valueOffset = 0</pre>		
	<pre>compareOffset = 0</pre>		
	compareLength = 17		

6.2.8.19.4 Test Coverage

CRR number	Test case number	
N1	12	
N2	14	
N3	13, 17, 20, 21	
N4	15, 18, 22	
N5	16, 19	
N6	23	
P1	1	
P2	2, 3, 4, 5, 6	
P3	7, 8, 9, 10	
P4	11	
C1	Does not apply for	
	Proactive Response Handler	

6.2.9 Class ToolkitRegistry

6.2.9.1 Method allocateTimer

Test Area Reference: API 2 TKR ATIM

6.2.9.1.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API. public byte allocateTimer() throws ToolkitException

Normal execution

CRRN1: the returned timer identifier shall be between 01 and 08 inclusive.

CRRN2: the returned timer identifier shall be different from a previously allocated but not released one.

CRRN3: The SIM Toolkit Framework shall trigger the applet when receiving an ENVELOPE(TIMER EXPIRATION) command for the allocated timer.

CRRN4: A call to isEventSet() method for EVENT_TIMER_EXPIRATION should return true if the applet has at least one timer allocated.

Parameters error

No requirements

Context errors

CRRC1: Shall throw a ToolkitException with reason NO_TIMER_AVAILABLE if all the timers are allocated.

CRRC2: Shall throw a ToolkitException with reason NO_TIMER_AVAILABLE if the maximum number of timers have been allocated to this applet according to installation parameter.

6.2.9.1.2 Test suite files

Test Script: API_2_TKR_ATIM_1.scr

Test Applet: API_2_TKR_ATIM_1.java

-----API_2_TKR_ATIM_2.java

-----API_2_TKR_ATIM_3.java

Installation parameters:

For this test procedure the non-volatile memory of each instance is 200 (Hexa).

The maximum timer parameter value is as follows for each applet:

- applet 1 (API_2_TKR_ATIM_1): 8 timers

- applet 2 (API_2_TKR_ATIM_2): 4 timers

- applet 3 (API_2_TKR_ATIM_3): 0 timer

Load Script: API_2_TKR_ATIM_1.ldr

The load script installs the 6 instances.

Cleanup Script: API_2_TKR_ATIM_1.clr

Parameter File: API_2_TKR_ATIM_1.par

6.2.9.1.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Allocates up to 8 timers (applet 1)	No exception shall be thrown. Timer ID returned shall be between 01 and 08 inclusive. It shall be	
	8 * allocateTimer().	different after each call.	
2	Allocate timers more than the maximum (applet 1) The applet 1 allocates 1 more timer.	Shall throw a ToolkitException with reason NO_TIMER_AVAILABLE.	
3	Check applet is Triggered by ENVELOPE(TIMER_EXPIRATION) command (applet1) Send ENVELOPE(TIMER EXPIRATION) with all timers id (not in an increase order). Calls releaseTimer(id) each time a timer expires.	Shall trigger each time an ENVELOPE(TIMER EXPIRATION) is sent to the SIM, for Timer ID = '01' to '08'.	
4	Allocate up to 4 timers (applet 2) 4 * allocateTimer().	No exception shall be thrown. Each time, the returned timer identifier shall be between '01' and '08' inclusive. It shall be different after each call.	
5	Allocate timers more than the maximum (applet 3) The applet 3 allocates 1 more timer.	Shall throw a ToolkitException with reason NO_TIMER_AVAILABLE.	
	The apprec 3 arrocates I more cimer.		

6.2.9.1.4 Test Coverage

CRR number	Test case number	
N1	1,4	
N2	1,4	
N3	3	
N4	1	
C1	2	
C2	5	

- 6.2.9.2 Method changeMenuEntry

Test Area Reference: API_2_TKR_CMETB_BSSBZBS

6.2.9.2.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: The SIM Toolkit Framework shall dynamically update the menu stored in the ME by issuing a SET UP MENU proactive command. The later will reflect the changes done for the entry. The SIM Toolkit Framework shall use the data of the EF sume file in order to build the SET UP MENU command.

CRRN2: The default state of the changed menu entry is 'enabled'.

CRRN3: a call to isEventSet() method on EVENT_MENU_SELECTION shall return true before and after the call.

CRRN4: if helpSupported was true then a call to isEventSet() method on EVENT_MENU_SELECTION_HELP_REQUEST event shall return true.

CRRN5: if helpSupported was true then after the completion of the SETUP MENU command, if an ENVELOPE(MENU_SELECTION_HELP_REQUEST) command is received by the SIM for this entry, then the SIM Toolkit framework shall trigger the applet.

CRRN6: if help supported was true, the SIM Toolkit Framework shall issue a SETUP MENU command with command qualifier = '80'

CRRN7: if helpSupported was false and if no entries is supporting help then a call to isEventSet() method on EVENT_MENU_SELECTION_HELP_REQUEST event shall return false .

CRRN8: if helpSupported was false and if no entries is supporting help then after the completion of the SETUP MENU command, if an ENVELOPE(MENU_SELECTION_HELP_REQUEST) command is received by the SIM, then the SIM Toolkit framework shall not trigger the applet.

CRRN9: The SIM Toolkit Framework shall supply in the SET UP MENU command with the icon identifier provided in the icon identifier list within the item icon identifier list Simple TLV if all the applets registered to the EVENT_MENU_SELECTION provide it.

CRRN10: The SIM Toolkit Framework shall set in the SET UP MENU command with the Icon list qualifier transmitted to the ME as 'icon is not self explanatory' if one of the applet registered prefers this qualifier.

CRRN11: If Next Action Indicator was different from '00', the SIM Toolkit Framework shall issue a SETUP MENU proactive command containing an Items Next Action Indicator simple TLV with the comprehension flag set to 0 as defined in GSM 11.14 [4].

Parameters error

CRRP1: Shall throw java.lang.NullPointerException - if menuEntry is null

CRRP2: Shall throw java.lang.ArrayIndexOutOfBoundsException - if offset would cause access outside array bounds

CRRP3: Shall throw java.lang.ArrayIndexOutOfBoundsException - if length would cause access outside array bounds

CRRP4: Shall throw java.lang.ArrayIndexOutOfBoundsException - if both offset and length would cause access outside array bounds

Context errors

CRRC1: Shall throw a ToolkitException with MENU_ENTRY_NOT_FOUND reason if the Menu Identifier isn't associated to the calling applet instance.

CRRC2: Shall throw ALLOWED_LENGTH_EXCEEDED if the menu entry string is bigger than the allocated space.

6.2.9.2.2 Test suite files

Additional requirements for the GSM personalisation:

- content of EF sume shall be:

- Title Alpha Identifier: "TOOLKIT TEST"

Test Script: API_2_TKR_CMETB_BBSSBZBS_1.scr

Test Applet: API_2_TKR_CMETB_BBSSBZBS_1.java

- entry '01' is "Init1"

- entry '02' is "Init2"

Installation parameter:

Same as default applet but with:

- Maximum text length for a menu entry: 15

- Maximum number of menu entries: 2

- Position / Identifier for each menu entry: '01'/'01','02'/'02'

Load Script: API_2_TKR_CMETB_BBSSBZBS_1.ldr

Cleanup Script: API_2_TKR_CMETB_BBSSBZBS_1.clr

Parameter File: API_2_TKR_CMETB_BBSSBZBS_1.par

6.2.9.2.3 Test procedure

ld	Description		API Expectation	APDU Expectation
1	Applet changes the entry's title by menuEntry			
	buffer, with a greater length than the initial length			
	1- ChangeMenuEntry()with parameters:			
	Id = '02' MenuEntry = "UseAllBuffer"	1- thrown.	No exception shall be	
	Offset = 0 Length = menuEntry.length NextAction = 0	2-	shall return true.	
	<pre>HelpSupported = false IconQualifier = 0 IconIdentifier = 0.</pre>	3-	shall return false.	
	2- isEventSet(EVENT_MENU_SELECTION).			
	3- isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST).			The SIM shall issue a SETUP MENU proactive command which contains the new text for entry ID '02'.
2	Changing the title with part of menuEntry buffer			02.
	1- changeMenuEntry()with parameters:			
	Id = '01' MenuEntry = "UsePartOfBuffer"	1- thrown.	No exception shall be	
	Offset = 3 Length = 12 NextAction = 0	2-	Shall return true.	
	<pre>HelpSupported = false IconQualifier = 0 IconIdentifier = 0.</pre>	3-	Shall return false.	
	2- isEventSet(EVENT_MENU_SELECTION).			The SIM shall issue a
	3- isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST)			SETUP MENU proactive command which contains the new text for entry ID '01'.
3	Length = 0			01.
	1- changeMenuEntry() for entry '01' and entry '02', with parameters:			
	Id = '01'/'02' MenuEntry = "LengthEquals0" Offset = 0 Length = 0	1- thrown.	No exception shall be	
	NextAction = 0 HelpSupported = false	2-	Shall return true.	
	<pre>IconQualifier = 0 IconIdentifier = 0.</pre>	3-	shall return false.	
	2- isEventSet(EVENT_MENU_SELECTION).			The SIM shall issue a
	3- isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST).			SETUP MENU proactive command which contains for entry '01'and entry '02', no text part.
4	Setting a next action indicator != 0			
	<pre>1- changeMenuEntry()with parameters: Id = '02'</pre>	1- thrown. 2-	No exception shall be Shall return true.	The SIM shall issue a SETUP MENU proactive command which contains an
	MenuEntry = "NextActionIndic" Offset = 0 Length = menuEntry.length	3-	Shall return false.	Items Next Action Indicator list and which contains a command qualifier '80'.

		1	
	NextAction = '10' (SETUP CALL)		
	<pre>HelpSupported = false IconQualifier = 0</pre>		
	IconIdentifier = 0		
	Confidencialier = 0		
	2- isEventSet(EVENT_MENU_SELECTION).		
	I INDIVIDUO (IVENT_NENO_DEEEDTION)		
	3-		
	isEventSet(EVENT_MENU_SELECTION_HELP_R		
	EQUEST).		
	4- changeMenuEntry()with parameters:		
	Id = '02'		
	MenuEntry = "NextActionIndic"		
	Offset = 0		
	Length = menuEntry.length		
	NextAction = '10' (SETUP CALL) HelpSupported = true		
	IconOualifier = 0		
	IconIdentifier = 0		
5	Checking applet is triggered by a		
	MENU_SELECTION_HELP_REQUEST	Applet is trigged by a	
		MENU_SELECTION_HELP_REQU	
	Send ENVELOPE(MENU_SELECTION_HELP_REQUEST)	EST and the Item Identifier is 02	
	with Item Identifier = '02'		
6	help supported=true		
	1- changeMenuEntry()with parameters:		
	<pre>1- changeMenuEntry()with parameters:</pre>		
	Id = '01'		
	MenuEntry = "HelpSupported"	1- No exception shall be	
	Offset = 0	thrown.	
	Length = menuEntry.length		
	NextAction = 0	Shall return true.	
	HelpSupported = true		
	<pre>IconQualifier = 0</pre>	3- Shall return true.	
	<pre>IconIdentifier = 0</pre>		
	2 destroy t Cot / EVENE MENU CEL ECETON		
	2- isEventSet(EVENT_MENU_SELECTION).		
	3-		The SIM shall issue a
	isEventSet(EVENT_MENU_SELECTION_HELP_R		SETUP MENU proactive
	EQUEST).		command which contains a
			command qualifier '80'.
7	Checking applet is triggered by a		•
-	MENU_SELECTION_HELP_REQUEST	Applet is trigged by a	
		MENU_SELECTION_HELP_REQU	
	Send ENVELOPE(MENU_SELECTION_HELP_REQUEST)	EST and the Item Identifier is 01	
	with Item Identifier = '01'		
8	Setting icons, help supported = false		
Ì	octing loons, help supported = laise		
1			_
	1- changeMenuEntry() for entries		
	1- changeMenuEntry() for entries '01','02', with parameters:		
	<pre>1- changeMenuEntry() for entries '01','02', with parameters: Id = '01'/'02'</pre>		
	1- changeMenuEntry() for entries '01','02', with parameters:	1- No exception shall be	
	1- changeMenuEntry() for entries '01','02', with parameters: Id = '01'/'02' MenuEntry = "IconQualifier"	1- No exception shall be thrown.	
	1- changeMenuEntry() for entries '01','02', with parameters: Id = '01'/'02' MenuEntry = "IconQualifier" Offset = 0	thrown.	
	1- changeMenuEntry() for entries '01','02', with parameters: Id = '01'/'02' MenuEntry = "IconQualifier" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false		
	1- changeMenuEntry() for entries '01','02', with parameters: Id = '01'/'02' MenuEntry = "IconQualifier" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false IconQualifier = '01'	thrown.	
	1- changeMenuEntry() for entries '01','02', with parameters: Id = '01'/'02' MenuEntry = "IconQualifier" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false	thrown.	
	1- changeMenuEntry() for entries '01','02', with parameters: Id = '01'/'02' MenuEntry = "IconQualifier" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false IconQualifier = '01' IconIdentifier = '02' / '01'	thrown. 2- Shall return true.	
	1- changeMenuEntry() for entries '01','02', with parameters: Id = '01'/'02' MenuEntry = "IconQualifier" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false IconQualifier = '01'	thrown. 2- Shall return true.	
	1- changeMenuEntry() for entries '01','02', with parameters: Id = '01'/'02' MenuEntry = "IconQualifier" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false IconQualifier = '01' IconIdentifier = '02' / '01'	thrown. 2- Shall return true.	The SIM shall issue a
	1- changeMenuEntry() for entries '01','02', with parameters: Id = '01'/'02' MenuEntry = "IconQualifier" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false IconQualifier = '01' IconIdentifier = '02' / '01' 2- isEventSet(EVENT_MENU_SELECTION).	thrown. 2- Shall return true.	SETUP MENU proactive
	1- changeMenuEntry() for entries '01','02', with parameters: Id = '01'/'02' MenuEntry = "IconQualifier" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false IconQualifier = '01' IconIdentifier = '02' / '01' 2- isEventSet(EVENT_MENU_SELECTION). 3-	thrown. 2- Shall return true.	SETUP MENU proactive command which contains an
	1- changeMenuEntry() for entries '01','02', with parameters: Id = '01'/'02' MenuEntry = "IconQualifier" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false IconQualifier = '01' IconIdentifier = '02' / '01' 2- isEventSet(EVENT_MENU_SELECTION). 3- isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST).	thrown. 2- Shall return true.	SETUP MENU proactive
9	1- changeMenuEntry() for entries '01','02', with parameters: Id = '01'/'02' MenuEntry = "IconQualifier" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false IconQualifier = '01' IconIdentifier = '02' / '01' 2- isEventSet(EVENT_MENU_SELECTION). 3- isEventSet(EVENT_MENU_SELECTION_HELP_R	thrown. 2- Shall return true. 3- Shall return false.	SETUP MENU proactive command which contains an lcon Identifier List.
9	1- changeMenuEntry() for entries '01','02', with parameters: Id = '01'/'02' MenuEntry = "IconQualifier" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false IconQualifier = '01' IconIdentifier = '02' / '01' 2- isEventSet(EVENT_MENU_SELECTION). 3- isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST).	thrown. 2- Shall return true. 3- Shall return false.	SETUP MENU proactive command which contains an

	<pre>2- changeMenuEntry()with parameters: Id = '01' MenuEntry = "EnableEntry" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0 3- isEventSet(EVENT_MENU_SELECTION). 4- isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST).</pre>	 2- No exception shall be thrown. 3- Shall return true. 4- Shall return false. 	command which contains the entry. Without Icon identifier List Simple TLV
10	MenuEntry is null		
	changeMenuEntry()with: MenuEntry = NULL	Shall throw java.lang.NullPointerException.	
11	Offset causes access outside array bounds Id = '01' MenuEntry = "Violation" Offset = menuEntry.length +1 Length = 0 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0	Shall throw java.lang.ArrayIndexOutOfBoundsE xception.	
12	Big Offset causes access outside array bounds Id = '01' MenuEntry = "Violation" Offset = 255 Length = 1 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0	Shall throw java.lang.ArrayIndexOutOfBoundsE xception.	
13	Offset < 0 causes access outside array bounds Id = '01' MenuEntry = "Violation" Offset = -1 Length = 1 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0	Shall throw java.lang.ArrayIndexOutOfBoundsE xception.	
14	Length causes access outside array bounds Id = '01' MenuEntry = "Violation" Offset = 0 Length = MenuEntry.length + 1 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0.	Shall throw java.lang.ArrayIndexOutOfBoundsE xception.	
15	Length < 0 causes access outside array bounds Id = '01' MenuEntry = "Violation" Offset = 0 Length = -1	Shall throw java.lang.ArrayIndexOutOfBoundsE xception.	

	NextAction = 0		
	HelpSupported = false		
	<pre>IconQualifier = 0</pre>		
	<pre>IconIdentifier = 0.</pre>		
16	Both offset and length causes access outside		
10			
	array bounds		
	Id = '01'		
	MenuEntry = "Violation"	Shall throw	
	Offset ∈ [1, MenuEntry.length]	java.lang.ArrayIndexOutOfBoundsE	
	Length = MenuEntry.length	xception.	
	NextAction = 1	Acception.	
	HelpSupported = false		
	IconOualifier = 0		
	IconIdentifier = 0		
17	Invalid ID used		
	-1		
	Id = '00'		
	MenuEntry = contains text, != null	Shall throw a ToolkitException with	
	Offset = 0 Length = menuEntry.length < 16	MENU_ENTRY_NOT_FOUND	
	NextAction = 0	reason code.	
	HelpSupported = false		
	IconOualifier = 0		
	IconIdentifier = 0		
18	ID isn't allocated to a menu entry of this applet		
	instance		
	Id = '0A'		
	MenuEntry = contains text, != null	Shall throw a ToolkitException with	
	Offset = 0	reason code:	
	Length = menuEntry.length < 16	MENU_ENTRY_NOT_FOUND.	
	NextAction = 0		
	<pre>HelpSupported = false IconQualifier = 0</pre>		
	IconIdentifier = 0		
19	The text is bigger than the allocated space		
	Id = '02'		
	MenuEntry = contains text, != null	O. 11.0 T. 11.75 C. 10.	
	Offset = 0	Shall throw a ToolkitException with	
	Length = menuEntry.length > 15	reason code:	
	NextAction = 0 HelpSupported = false	ALLOWED_LENGTH_EXCEEDED.	
	IconQualifier = 0		
	IconIdentifier = 0		
20	With a smaller text length than the initial length		
	1 shannaManuTutung(), shahara sanatan		
	<pre>1. changeMenuEntry()with parameters:</pre>		
	Id = '02'		
	MenuEntry = "Init"	1. No exception shall be	
	Offset = 0	thrown.	
	Length = menuEntry.length		
	NextAction = 0	2. Shall return true.	
	HelpSupported = false		
	IconQualifier = 0	3. Shall return false.	The SIM shall issue a
	<pre>IconIdentifier = 0</pre>	S. Shan rotan raiso.	SETUP MENU proactive
	2. isEventSet(EVENT_MENU_SELECTION)		command which contains
			the new text for entry ID
	3.		'02'.
	isEventSet(EVENT_MENU_SELECTION_HELP_R		
	EQUEST)		

6.2.9.2.4 Test Coverage

CRR number	Test case number	
N1	1,2,3,4,6,8,9,20	
N2	9	
N3	1,2,3,4,6,8,9,20	
N4	6	
N5	7,5	
N6	6	
N7	1,2,3,4,8,9,20	
N8	To be checked in framework	
	tests and insert cross reference	
	here	
N9	8, 9	
N10	8	
N11	4	
P1	10	
P2	11,12,13	
P3	14,15	
P4	16	
C1	17,18	
C2	19	

6.2.9.3 Method clearEvent

Test Area Reference: API_2_TKR_CEVTB

6.2.9.3.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

public void clearEvent(byte event)

throws ToolkitException

Normal execution

CRRN1: A call to isEventSet() method for a cleared event should return false after a call to clearEvent.

CRRN2:The SIM Toolkit Framework shall not trigger the applet on the occurrence of the cleared event anymore.

CRRN3: if event was EVENT_CALL_CONTROL_BY_SIM and after the call, no applet is registered to it, The SIM Toolkit Framework shall allow an applet to register to this event.

CRRN4: if event was EVENT_CALL_CONTROL_BY_SIM and one applet is still registered to these event, The SIM Toolkit Framework shall not allow an applet to register to this event.

CRRN5: if event was EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM and after the call, no applet is registered to it, The SIM Toolkit Framework shall allow an applet to register to this event.

CRRN6: if event was EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM and one applet is still registered to these event, The SIM Toolkit Framework shall not allow an applet to set this event.

Parameters error

CRRP1: Shall throw a Toolkit Exception with reason EVENT_NOT_ALLOWED if event was EVENT_MENU_SELECTION.

CRRP2: Shall throw a Toolkit Exception with reason EVENT_NOT_ALLOWED if event was EVENT_MENU_SELECTION_HELP_REQUEST.

CRRP3: Shall throw a Toolkit Exception with reason EVENT_NOT_ALLOWED if event was EVENT_TIMER_EXPIRATION.

CRRP4: Shall throw a Toolkit Exception with reason EVENT_NOT_ALLOWED if event was EVENT_STATUS_COMMAND.

Context errors

No requirements

6.2.9.3.2 Test suite files

Test Script: API_2_TKR_CEVTB_1.scr

Test Applet: API_2_TKR_-CEVTB-_1.java

As default but applet registers to an event list which contains all defined events in GSM 03.19 [7] excepted those that aren't allowed or supported by setEvent().

Load Script: API_2_TKR_-CEVTB_1.ldr

Cleanup script: ——API_2_TKR_-CEVTB_1.clr

Parameter File: API_2_TKR_CEVTB_1.par

6.2.9.3.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Clear ALLOWED unregistered events		-
	For events ranging from 1 to 127 excepted those that aren't allowed (EVENT_MENU_SELECTION, EVENT_MENU_SELECTION_HELP_REQUEST, EVENT_TIMER_EXPIRATION, EVENT_STATUS_COMMAND), the applet calls:	1- No exception is thrown each time. 2- Shall return false each time.	
	1- clearEvent() method		
	2- isEventSet() method		
2	Clear registered events		
	<pre>1- For each ALLOWED and SUPPORTED events, the applet calls setEvent() method. 2- For events ranging from 1 to 127</pre>	1- No exception shall be thrown.	
	excepted those that aren't allowed, the applet calls:	2.1- No exception shall be thrown.	
	2.1- clearEvent() method 2.2- isEventSet() method	2.2- Shall return false.	
3	Clearing NOT ALLOWED events For each event among: EVENT_MENU_SELECTION, EVENT_MENU_SELECTION_HELP_REQUEST, EVENT_TIMER_EXPIRATION, EVENT_STATUS_COMMAND 1- The applet calls clearEvent(event) method.	1- Each time, clearEvent shall throw a Toolkit Exception with reason EVENT_NOT_ALLOWED.	
4	Checking applet isn't triggered by an ENVELOPE(SMS-PP DOWNLOAD) command 1 - reset and initialise the card 2 - An ENVELOPE(SMS-PP DOWNLOAD) is sent with a TAR referencing applet.	Applet is not trigged by an ENVELOPE(SMS-PP DOWNLOAD) command	

6.2.9.3.4 Test Coverage

CRR number	Test case number
N1	1,2
N2	4
N3	Framework
N4	Framework
N5	Framework
N6	Framework
P1	3
P2	3
P3	3
P4	3

- 6.2.9.4 Method disableMenuEntry

Test Area Reference: API_2_TKR_DMETB

6.2.9.4.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: A call to isEventSet() method on EVENT_MENU_SELECTION shall return the same result before and after the call to disableMenuEntry() method.

CRRN2: A call to isEventSet() method on EVENT_MENU_SELECTION_HELP_REQUEST shall return the same result before and after the call to disableMenuEntry() method.

CRRN3: After invocation of this method the SIM Toolkit Framework shall dynamically update the menu stored in the ME .

CRRN4: After invocation of this method, if there is no more enabled menu entries then the SIM Toolkit framework shall issue a SETUP MENU proactive command containing Item Data Object for Item 1 TLV with a length of zero and no value part.

Parameters error

No requirements

Context errors

CRRC1: shall throw a ToolkitException with reason = ENTRY_NOT_FOUND if the menu entry doesn't exist for this applet

6.2.9.4.2 Test suite files

Additional requirements for the GSM personalisation:

content of EF sume shall be:

- Title Alpha Identifier: "TOOLKIT TEST"

Test Script: API_2_TKR_DMETB_1.scr

Test Applet: API_2_TKR_DMETB_1.java

Installation parameter:

Same as default applet but with:

- Maximum text length for a menu entry: 15

- Maximum number of menu entries: 2

- Position / Identifier for each menu entry: '01'/'01', '02'/'02'

Load Script: API_2_TKR_DMETB_1.ldr

Cleanup script: API_2_TKR_DMETB_1.clr

Parameter File: API 2 TKR DMETB 1.par

6.2.9.4.3 Test procedure

ld	Description		API Expectation	APDU Expectation
1	Check the menu state before disabling a previously enabled entry not registered to EVENT_MENU_SELECTION_HELP_REQUEST 1- reset and initialise the card 2- isEventSet(EVENT_MENU_SELECTION) 3- isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST)	1- 2-	Shall return true Shall return false	1- The SIM shall issue a SET UP MENU proactive command with entry '01' and '02'.
2	Check the menu state after disabling a previously enabled entry not registered to EVENT_MENU_SELECTION_HELP_REQUEST			
	<pre>1- disableMenuEntry('01') 2- isEventSet(EVENT_MENU_SELECTION) 3- isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST)</pre>	1- thrown. 2- 3-	No exception shall be Shall return true. Shall return false.	3- The SIM shall issue a SET UP MENU proactive command with entry '02' only.
3	Check the menu before disabling a previously enabled entry registered to EVENT_MENU_SELECTION_HELP_REQUEST 1- change Menu Entry '02' to indicate help supported 2- isEventSet(EVENT_MENU_SELECTION) 3- isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST)	2- 3-	Shall return true Shall return true	3- The SIM shall issue a SET UP MENU proactive command with entry '02', indicating help supported.
4	Check the menu after disabling a previously enabled entry registered to EVENT_MENU_SELECTION_HELP_REQUEST 1- disableMenuEntry('02') 2- isEventSet(EVENT_MENU_SELECTION) 3- isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST)	1- thrown. 2- 3-	No exception shall be Shall return true. Shall return true.	3- The SIM shall issue a SET UP MENU proactive command with 1st Item TLV with a length of 0.
5	Disabling invalid entries			
	For ID ranging from '00' to 'FF' except '01' and '02', the applet calls disableMenuEntry(ID) method.	MENU_	ne a Toolkit Exception with ENTRY_NOT_FOUND code shall be thrown.	

6.2.9.4.4 Test Coverage

CRR number	Test case number	
N1	1,2,3,4	
N2	1,2,3,4	
N3	2,4	
N4	4	
C1	5	

- 6.2.9.5 Method enableMenuEntry

Test Area Reference: API_2_TKR_EMETB

6.2.9.5.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: A call to isEventSet() method on EVENT_MENU_SELECTION shall return the same result before and after the call to enableMenuEntry() method.

CRRN2: A call to isEventSet() method on EVENT_MENU_SELECTION_HELP_REQUEST shall return the same result before and after the call to enableMenuEntry() method.

CRRN3:The SIM Toolkit Framework shall dynamically issue a SETUP MENU proactive command which does contain an ITEM SIMPLE TLV object for this entry.

Parameters error

No requirements

Context errors

CRRC1: shall throw a ToolkitException with reason = MENU_ENTRY_NOT_FOUND if the menu entry doesn't exist for this applet

6.2.9.5.2 Test suite files

Additional requirements for the GSM personalisation:

- content of EF sume shall be:

- Title Alpha Identifier: "TOOLKIT TEST"

Test Script: API_2_TKR_EMETB_1.scr

Test Applet: API_2_TKR_EMETB_1.java

Installation parameter:

Same as default applet but with:

- Maximum text length for a menu entry: 15

- Maximum number of menu entries: 2

Position / Identifier for each menu entry: '01'/'01', '02'/'02'

Load Script: API_2_TKR_EMETB_1.ldr

Cleanup script: API_2_TKR_EMETB_1.clr

Parameter File: API_2_TKR_EMETB_1.par

6.2.9.5.3 Test procedure

ld	Description		API Expectation	APDU Expectation
1	Check menu state before enabling a previously disabled entry not registered to EVENT_MENU_SELECTION_HELP_REQUEST 1- isEventSet(EVENT_MENU_SELECTION) 2- isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST) 3- disableMenuEntry('01')	1- 2- 3- thrown.	Shall return true Shall return false No exception shall be	3- The SIM shall issue a SET UP MENU proactive command with entry '02' only.
2	Check menu state after enabling a previously disabled entry not registered to EVENT_MENU_SELECTION_HELP_REQUEST 1- enableMenuEntry('01') 2- isEventSet(EVENT_MENU_SELECTION) 3- isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST)	1- thrown. 2- 3-	No exception shall be Shall return true. Shall return false.	3- The SIM shall issue a SET UP MENU proactive command with entry '01' and '02'.
3	Check menu state before enabling a previously enabled entry registered to EVENT_MENU_SELECTION_HELP_REQUEST 1- change Menu Entry '02' to indicate help supported 2- isEventSet(EVENT_MENU_SELECTION) 3- isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST) 4- disableMenuEntry('02')	2- 3- 4- thrown	Shall return true Shall return true No exception shall be	4- The SIM shall issue a SET UP MENU proactive command with entry '01'. The help information available flag.is not verified
4	Check menu state after enabling a previously enabled entry registered to EVENT_MENU_SELECTION_HELP_REQUEST 1- enableMenuEntry('02'). 2- isEventSet(EVENT_MENU_SELECTION) 3- isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST)	1- thrown. 2- 3-	No exception shall be Shall return true. Shall return true.	3- The SIM shall issue a SET UP MENU proactive command with entries '01' and '02' indicating help supported.
5	Enabling invalid entries For ID ranging from '00' to 'FF' except '01' and '02', the applet calls enableMenuEntry(ID) method.	MENU_	ne a Toolkit Exception with ENTRY_NOT_FOUND code shall be thrown.	

6.2.9.5.4 Test Coverage

CRR number	Test case number	
N1	1,2,3,4	
N2	1,2,3,4	
N3	1,2,3,4	
C1	5	

- 6.2.9.6 Method getEntry

Test Area Reference: API_2_TKR_GETY

6.2.9.6.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: returns a reference to the applet ToolkitRegistry object of the calling applet.

CRRN2: Each successive call to getEntry() method shall return the same object.

Parameters error

No requirements

6.2.9.6.2 Test suite files

Test Script: API_2_TKR_GETY_1.scr

Test Applet: API_2_TKR_GETY_1.java

Load Script: API_2_TKR_GETY_1.ldr

Cleanup script: ——API_2_TKR_GETY_1.clr

Parameter File: API_2_TKR_GETY_1.par

6.2.9.6.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Installalation	Returns a not null ToolkitRegistry	
	In the constructor, the applet instance calls the getEntry() method.	instance.	
2	Check it returns the same entry The applet calls the getEntry() method again.	Returns the same ToolkitRegistry instance as for test case 1.	

6.2.9.6.4 Test Coverage

CRR number	Test case number	
N1	1	
N2	2	

6.2.9.7 Method getPollInterval

Test Area Reference: API_2_TKR_GPOL

6.2.9.7.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API. public short getPollInterval()

Normal execution

CRRN1: shall return a value between 1 and 15300 if applet is registered to EVENT_STATUS_COMMAND event.

CRRN2: shall return POLL_NO_DURATION value (0) if the toolkit applet is not registered to EVENT_STATUS_COMMAND event.

Parameters error

No requirements.

Context errors

No requirements.

6.2.9.7.2 Test suite files

Test Script: API_2_TKR_GPOL_1.scr

Test Applet: API_2_TKR_-GPOL_1.java

Load Script: API_2_TKR_-GPOL_1.ldr

Cleanup script: ——API_2_TKR_-GPOL_1.clr

Parameter File: API 2 TKR GPOL 1.par

6.2.9.7.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Applet isn't registered to EVENT_STATUS_COMMAND getPollInterval().	Shall return 0.	
2	Requesting max duration	A No sussession shall be	
	1- requestPollInterval(15300)	1- No exception shall be thrown.	
	2- Reset and initialize the card	3- Shall return a value	
	<pre>3- getPollInterval()</pre>	between 1 and 15300.	
3	Requesting System Duration		
	<pre>1- requestPollInterval(POLL_SYSTEM_DURATI ON)</pre>	1- No exception shall be thrown.	
	2- Reset and initialize the card	3- Shall return a value petween 1 and 15300.	
	3- getPollInterval().	between Fand 19900.	
4	Requesting no Duration		
	1- requestPollInterval(POLL_NO_DURATION)	1- No exception shall be	
	2- Reset and initialize the card	thrown.	
	3- getPollInterval().	3- Shall return 0.	

6.2.9.7.4 Test Coverage

CRR number	Test case number	
N1	2,3	
N2	1,4	

6.2.9.8 Method initMenuEntry

Test Area Reference: API_2_TKR_IMET_BSSBZBS

6.2.9.8.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

Normal execution

- CRRN1: The SIM Toolkit Framework shall automatically update the menu stored in the ME by issuing a SETUP MENU proactive command. The later will reflect the changes done for the entry. The SIM Toolkit Framework shall use the data of the EF sume file in order to build the SET UP MENU command.
- CRRN2: a call to isEventSet() method on EVENT_MENU_SELECTION shall return true after the 1st successful call (without an exception).
- CRRN3: if helpSupported was true then a following call to isEventSet() method on EVENT_MENU_SELECTION_HELP_REQUEST event shall return true.
- CRRN4: if helpSupported was true then after the completion of the SETUP MENU command, if an ENVELOPE(MENU_SELECTION_HELP_REQUEST) command is received by the SIM for this entry, then the SIM Toolkit framework shall trigger the applet.
- CRRN5: if help supported was true, the SIM Toolkit Framework shall issue a SETUP MENU command with command qualifier = '80'
- CRRN6: if helpSupported was false and there isn't any menu entry supporting help then a call to isEventSet() method on EVENT_MENU_SELECTION_HELP_REQUEST event shall return false.
- CRRN7: The SIM Toolkit Framework shall supply in the SET UP MENU command with the icon identifier provided in the icon identifier list within the item icon identifier list Simple TLV if all the applets registered to the EVENT_MENU_SELECTION provide it.
- CRRN8: The SIM Toolkit Framework shall set in the SET UP MENU command with the Icon list qualifier transmitted to the ME as 'icon is not self explanatory' if one of the applet registered prefers this qualifier.
- CRRN9: If Next Action Indicator was different from '00', the SIM Toolkit Framework shall issue a SETUP MENU proactive command containing an Items Next Action Indicator simple TLV with the comprehension flag set to 0.
- CRRN10: After the completion of the SETUP MENU command, if an ENVELOPE (MENU_SELECTION) command is received by the SIM for this identifier, then the SIM Toolkit framework shall trigger the applet.

Parameters error

CRRP1: Shall throw java.lang.NullPointerException - if menuEntry is null

CRRP2: Shall throw java.lang.ArrayIndexOutOfBoundsException - if offset would cause access outside array bounds

CRRP3: Shall throw java.lang.ArrayIndexOutOfBoundsException - if length would cause access outside array bounds

CRRP4:Shall throw java.lang.ArrayIndexOutOfBoundsException - if both offset and length would cause access outside array bounds

Context errors

CRRC1: Shall throw ALLOWED_LENGTH_EXCEEDED if the menu entry string is bigger than the allocated space

CRRC2: Shall throw REGISTRY_ERROR if the menu entry cannot be initialised (eg no more item data in applet loading parameter)

6.2.9.8.2 Test suite files

Additional requirements for the GSM personalisation:

- content of EF sume shall be:

- Title Alpha Identifier: "TOOLKIT TEST"

- Test case trigger: 1- Applet instantiation

2- Menu selection

3- Menu selection Help Supported

Test Script: API_2_TKR_IMET_BSSBZBS_1.scr

Test Applet: API_2_TKR_IMET_BSSBZBS_1.java

Installation parameter:

Same as default applet but with:

- Maximum text length for a menu entry: 15

- Maximum number of menu entries: 6

- Position / Identifier for each menu entry: '01'/'01', '02'/'02', '03'/'03', '04'/'04', '05'/'05', and '06'/'06'

Load Script: API_2_TKR_IMET_BSSBZBS_1.ldr

Cleanup script: ——API_2_TKR_IMET_BSSBZBS_1.clr

Parameter File: API 2 TKR IMET BSSBZBS 1.par

6.2.9.8.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	NULL as parameter to menuEntry	Shall throw a	Al Do Expediation
-	MenuEntry = NULL	java.lang.NullPointerException.	
2	Offset > menuEntry.length		
		Shall throw	
	MenuEntry = "ToolkitTest" Offset = 12	java.lang.ArrayIndexOutOfBoundsE	
	Length = 0	xception.	
3	Offset < 0		
		Shall throw	
	MenuEntry = "ToolkitTest" Offset = -1	java.lang.ArrayIndexOutOfBoundsE	
	Length = 11	xception.	
4	Offset = 255		
		Shall throw	
	MenuEntry = "ToolkitTest"	java.lang.ArrayIndexOutOfBoundsE	
	Offset = 255 Length = 11	xception.	
5	Length = menuEntry.length+1	Shall throw	
	MenuEntry = "ToolkitTest"	java.lang.ArrayIndexOutOfBoundsE	
	Offset = 0	xception.	
	Length = 12	·	
6	Length < 0	Shall throw	
	MenuEntry = "ToolkitTest"	java.lang.ArrayIndexOutOfBoundsE	
	Offset = 0	xception.	
	Length = -1	1 · ·	
7	Offset + length > menuEntry.length		
	MenuEntry = "ToolkitTest"	Shall throw	
	Offset = 11	java.lang.ArrayIndexOutOfBoundsE	
	Length = 1	xception.	
8	MenuEntry.length > size allocated at loading		
	for each menu entry	ALLOWED LEVOTH TYPE	
	MenuEntry = "ToolkitTest impossible"	ALLOWED_LENGTH_EXCEEDED	
	Offset = 0	ToolkitException is thrown.	
	Length = 16		
9	Successful call,		
9	menuEntry is the whole buffer		
	1- initMenuEntry()		
	MenuEntry = "TOOLKIT TEST 1"	A No susse of 1 Hi	
	Offset = 0	1- No exception shall be	
	Length = 14	thrown, Shall return ID '01'.	
	NextAction = '00'	2- Shall return true.	
	<pre>HelpSupported = false IconQualifier = '00'</pre>		
	IconIdentifier = 0		
	2- isEventSet(EVENT_MENU_SELECTION)		
10	Successful call,		
10	menuEntry part of a buffer		
	. , ,		
	1- initMenuEntry()		
	MenuEntry = "1234567TOOLKIT TEST 2"	1 No evention shall be	
	Offset = 7	1- No exception shall be	
	Length = 14	thrown,Shall return ID '02'. 2- Shall return false.	
	NextAction = '00'	2- Shall return laise.	
	<pre>HelpSupported = false IconQualifier = '00'</pre>		
	IconIdentifier = 0		
i	2-		

	isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST)		
11	Successful call, menuEntry with help supported		
	1- initMenuEntry()		
	MenuEntry = "TOOLKIT TEST 3" Offset = 0 Length = 14 NextAction = '00' HelpSupported = true IconQualifier = '00' IconIdentifier = 0	1- No exception shall be thrown, Shall return ID '03' 2- Shall return true.	
	isEventSet(EVENT_MENU_SELECTION_HELP_R EQUEST)		
12	Successful call, menuEntry with an Icon		
	MenuEntry = "TOOLKIT TEST 4" Offset = 0 Length = 14 NextAction = '00' HelpSupported = false IconQualifier = '01' [icon not self explanatory] IconIdentifier = 1	No exception shall be thrown. Shall return ID '04'	
13	Successful call, menuEntry with a next action indication		
	MenuEntry = "TOOLKIT TEST 5" Offset = 0 Length = 14 NextAction = '24' [Select Item] HelpSupported = false IconQualifier = '00' IconIdentifier = 0	No exception shall be thrown. Shall return ID '05'	
14	Successful call, length = 0	No exception shall be thrown, Shall return ID '06'.	
	<pre>initMenuEntry() MenuEntry = "ToolkitTest" Offset = 0 Length = 0 NextAction = '00' HelpSupported = false IconQualifier = '00' IconIdentifier = 0</pre>		
15	<pre>Initialize more entry than allocated at loading MenuEntry = "ToolkitTest" Offset = 0</pre>	REGISTRY_ERROR ToolkitException is thrown.	
16	Length = 11 Dynamic update of the menu stored by the ME		Card shall Send a
	Fetch		SetUpMenu Proactive command: [CommandQualifier]=help supported [Alphald]="TOOLKIT TEST" [ItemId=1] = "TOOLKIT TEST 1" [ItemId=2] = "TOOLKIT TEST 2"
			[ItemId=3] = "TOOLKIT TEST 3" [ItemId=4] = "TOOLKIT

		TEST 4" [ItemId=5] = "TOOLKIT TEST 5" [ItemId=6] = "" [ItemsNextAction]=0600000 0002400
Check Applet is triggered by ENVELOPE(MENU_SELECTION) command Menu Entry ID = '01'	Applet is trigged by an ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '01'	
Check Applet is triggered by ENVELOPE(MENU_SELECTION) command Menu Entry ID = '02'	Applet is trigged by an ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '02'	
Check Applet is triggered by ENVELOPE(MENU_SELECTION) command Menu Entry ID = '03'	Applet is trigged by an ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '03'	
Check Applet is triggered by ENVELOPE(MENU_SELECTION) command Menu Entry ID = '04'	Applet is trigged by an ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '04'	
Check Applet is triggered by ENVELOPE(MENU_SELECTION) command Menu Entry ID = '05'	Applet is trigged by an ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '05'	
Check Applet is triggered by ENVELOPE (MENU_SELECTION_HELP_REQUEST) command		
Menu Entry ID = '03'	Applet is trigged by an ENVELOPE(MENU_SELECTION_HELP_REQUEST) command & Menu Entry ID = '03'	
Check Applet is triggered by ENVELOPE(MENU_SELECTION) command Menu Entry ID = '06'	Applet is trigged by an ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '06'	
	ENVELOPE(MENU_SELECTION) command Menu Entry ID = '01' Check Applet is triggered by ENVELOPE(MENU_SELECTION) command Menu Entry ID = '02' Check Applet is triggered by ENVELOPE(MENU_SELECTION) command Menu Entry ID = '03' Check Applet is triggered by ENVELOPE(MENU_SELECTION) command Menu Entry ID = '04' Check Applet is triggered by ENVELOPE(MENU_SELECTION) command Menu Entry ID = '05' Check Applet is triggered by ENVELOPE (MENU_SELECTION_HELP_REQUEST) command Menu Entry ID = '03' Check Applet is triggered by ENVELOPE(MENU_SELECTION_HELP_REQUEST) command	## Applet is trigged by an ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '01' Check Applet is triggered by ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '02' Check Applet is triggered by ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '02' Check Applet is triggered by ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '03' Check Applet is triggered by ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '03' Check Applet is triggered by ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '04' Check Applet is triggered by ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '04' Check Applet is triggered by ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '05' Check Applet is triggered by ENVELOPE (MENU_SELECTION) command & Menu Entry ID = '05' Check Applet is triggered by ENVELOPE (MENU_SELECTION) ENVELOPE(MENU_SELECTION) Applet is trigged by an ENVELOPE(MENU_SELECTION) ENVELOPE(MENU_SELECTION) Applet is trigged by an ENVELOPE(MENU_SELECTION) ENVELOPE(MENU_SELECTION) ENVELOPE(MENU_SELECTION) Applet is trigged by an ENVELOPE(MENU_SELECTION) ENV

6.2.9.8.4 Test Coverage

CRR number	Test case number	
N1	16	
N2	9	
N3	11	
N4	22	
N5	11,16	
N6	10	
N7	12,16	
N8	12,16	
N9	13,16	
N10	9,10,11,12,13,14,17,18,19,20,2	
	1,23	
P1	1	
P2	2,3,4	
P3	5,6	
P4	7	
C1	8	
C2	14	

- 6.2.9.9 Method is EventSet

Test Area Reference: API_2_TKR_IEVSB

6.2.9.9.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API. $public\ boolean\ isEventSet(byte\ event)$

Normal execution

CRRN1: shall return true if the event is set in the Toolkit Registry for the applet

CRRN2: shall return false if the event isn't set in the Toolkit Registry for the applet

Parameters error

No requirements.

Context errors

No requirements

6.2.9.9.2 Test suite files

Test Script: API_2_TKR_IEVSB_1.scr

Test Applet: API_2_TKR_-IEVSB-_1.java

Installation parameter:

Same as default applet but with:

- Maximum text length for a menu entry: 15

- Maximum number of menu entries: 1

- Position / Identifier for each menu entry: '01'/'01'

- Maximum number of timers: 1

Load Script: API_2_TKR_-IEVSB_1.ldr

Cleanup script: ——API_2_TKR_-IEVSB_1.clr

Parameter File: API 2 TKR IEVSB 1.par

6.2.9.9.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Events aren't set		-
	Applet calls isEventSet() for each events ranging from 1 to 127 excepted EVENT_FORMATTED_SMS_PP_ENV and EVENT_MENU_SELECTION.	Shall return false each time.	
2	For EVENT_FORMATTED_SMS_PP_ENV		
	isEventSet (EVENT_FORMATTED_SMS_PP_ENV)	Shall return true.	
3	For EVENT_MENU_SELECTION		
	isEventSet (EVENT_MENU_SELECTION)	Shall return true	
4	After clearing EVENT_FORMATTED_SMS_PP_ENV		
	1- clearEvent(EVENT_FORMATTED_SMS_PP_ENV)	1- No exception shall be thrown.	
	<pre>2- isEventSet(EVENT_FORMATTED_SMS_PP_ENV) .</pre>	2- Shall return false.	
5	Setting events		
	1- For each SUPPORTED and ALLOWED events for setEvent(), applet calls:	1.1- No exception shall be thrown.	
	1.1- setEvent() method	1.2- Shall return true each	
	1.2- isEventSet() method.	time.	
6	For EVENT_MENU_SELECTION_HELP_REQUEST		
	1- isEventSet	1- Shall return false.	
	(EVENT_MENU_SELECTION_HELP_REQUEST) 2- call changeMenuEntry with help	Oh all material torre	
	<pre>supported 3- isEventSet</pre>	3- Shall return true	
	(EVENT_MENU_SELECTION_HELP_REQUEST)		
7	For EVENT_TIMER_EXPIRATION		
	1- isEventSet(EVENT_TIMER_EXPIRATION)	1- Shall return false.	
	2- call allocateTimer() 3- isEventSet(EVENT_TIMER_EXPIRATION)	3- Shall return true	
8	For EVENT_STATUS_COMMAND		
	1- isEventSet(EVENT_STATUS_COMMAND) 2- call	1- Shall return false.	
	z- call requestPollInterval(POLL_SYSTEM_DURATION) 3- isEventSet(EVENT_STATUS_COMMAND)	3- Shall return true	

6.2.9.9.4 Test Coverage

CRR number	Test case number
N1	2,3,4,5,6,7,8
N2	1,5,6,7,8

- 6.2.9.10 Method releaseTimer

Test Area Reference: API_2_TKR_RTIMB

6.2.9.10.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: if it was the last allocated timer for the applet then a following call to isEventSet() method for EVENT_TIMER_EXPIRATION should return false.

CRRN2: if applet has timers allocated then a call to isEventSet(EVENT_TIMER_EXPIRATION) shall return true.

CRRN3: After invocation of the method the indicated timer shall be released and available for reallocation.

CRRN4: The applet is deregistered of the EVENT_TIMER_EXPIRATION for the indicated Timer Identifier.

Parameters error

CRRP1: shall throw a ToolkitException with INVALID_TIMER_ID reason if the timer identifier isn't between 1 and 8.

Context errors

CRRC1: shall throw a ToolkitException with INVALID_TIMER_ID reason if the timer is valid but isn't allocated to this applet.

6.2.9.10.2 Test suite files

Test Script: API_2_TKR_RTIMB_1.scr

Test Applet: API_2_TKR_RTIMB_1.java

Installation parameter:

As Default, except max timer which is set to 8.

Load Script: API_2_TKR_RTIMB_1.ldr

Cleanup script: API_2_TKR_RTIMB_1.clr

Parameter File: API 2 TKR RTIMB 1.par

6.2.9.10.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Releasing not allocated timers For each timer ID ranging from '00' to 'FF', applet calls releaseTimer(ID).	Each time, method shall throw a ToolkitException with reason code INVALID_TIMER_ID.	•
2	Releasing allocated timers 1- 8 * allocateTimer() . 2- 7 * releaseTimer(id). 3- isEventSet(EVENT_TIMER_EXPIRATION)	 No exception shall be thrown. Each time, no exception shall be thrown. Shall return true 	
3	Releasing invalid timer ID 1- releaseTimer('FF') method 2- isEventSet(EVENT_TIMER_EXPIRATION)	1- Shall throw a ToolkitException with INVALID_TIMER_ID reason code.	
4	Releasing last timer 1- releaseTimer(last timer allocated)	Shall return true. No exception shall be thrown.	
	2- isEventSet(EVENT_TIMER_EXPIRATION)	2- Shall return false.	
5	Checking we can allocate timers after they have been released 8 * allocateTimer().	No exception shall be thrown.	
6	Releasing all timers. For 1 to 8, releaseTimer(id).	No exception shall be thrown.	
7	Checking applet isn't triggered by ENVELOPE(TIMER_EXPIRATION) command Send ENVELOPE(TIMER_EXPIRATION)	Applet is not trigged by an ENVELOPE(TIMER_EXPIRATION) command	

6.2.9.10.4 **Test Coverage**

CRR number	Test case number	
N1	4	
N2	2,3	
N3	5,6	
N4	7	
P1	1,3	
C1	Framework	

6.2.9.11 Method requestPollInterval

Test Area Reference: API_2_TKR_RPOLS

6.2.9.11.1 Conformance requirement:

The method with following header shall be compliant to its definition in the API. public void requestPollInterval(short duration) throws ToolkitException

Normal execution

CRRN1: If duration is between 1 and 15300 or equal to POLL_SYSTEM_DURATION, the applet registers to EVENT_STATUS_COMMAND.

CRRN2: If duration is POLL_NO_DURATION, the applet is deregistered from EVENT_STATUS_COMMAND.

Parameters error

CRRP1: the method should throw a ToolkitException with REGISTRY_ERROR reason if duration is > 15300 or is < -1 (POLL_SYSTEM_DURATION).

Context errors

No Requirements.

6.2.9.11.2 Test suite files

Test Script: API_2_TKR_RPOLS_1.scr

Test Applet: API_2_TKR_RPOLS_1.java

Load Script: API_2_TKR_RPOLS_1.ldr

Cleanup script: ——API_2_TKR_RPOLS_1.clr

Parameter File: API_2_TKR_RPOLS_1.par

6.2.9.11.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Requesting a value between 1 and 15300 s		
	1- isEventSet(EVENT_STATUS_COMMMAND)	1- Shall return false.	
	2 For duration ranging from 1 to 15300, requestPollInterval(duration). 2- requestPollInterval(duration) for	2- No exception shall be thrown.	
	boundaries values: 1, 255, 256, 15300.	3- Shall return true.	
2	3- isEventSet(EVENT_STATUS_COMMAND). Check Applet is triggered by a STATUS		
_	command		
	1- reset and card initialisation	2- Applet is trigged by a STATUS command	
	1 Check Applet is triggered by a STATUS commandreset and card initialisation 2- Send STATUS command		
3	Requesting POLL SYSTEM DURATION		
	1- isEventSet(EVENT_STATUS_COMMMAND).	1- Shall return true.	
	2- RequestPollInterval(POLL_SYSTEM_DURATI ON).	2- No exception shall be thrown.	
	3- IsEventSet(EVENT_STATUS_COMMAND).	3- Shall return true.	
4	Check Applet is triggered by a STATUS command 1- reset and card initialisation 2- Send STATUS command	2- Applet is trigged by a STATUS command	
5	Requesting invalid duration		
	For duration ranging from 15301 to 15305, -2 requestPollInterval(duration) requestPollInterval(duration) for following values: 15301, 32767, -2, -32768	Each time, a ToolkitException with REGISTRY_ERROR reason code, shall be thrown.	
6	Requesting POLL NO DURATION	1- Shall return true.	
	1- isEventSet(EVENT_STATUS_COMMMAND) 2- requestPollInterval(POLL_NO_DURATION)	2- No exception shall be thrown.	
	3- isEventSet(EVENT_STATUS_COMMAND)	3- Shall return false.	
7	Check Applet isn't triggered by an STATUS command. 1- reset and card initialisation 2- Send STATUS command	2- Applet is not triggered by a STATUS command	

6.2.9.11.4 Test Coverage

CRR number	Test case number
N1	1,2,3,4
N2	6,7
P1	5

- 6.2.9.12 Method setEvent

Test Area Reference: API_2_TKR_SEVTB

6.2.9.12.1 Conformance Requirement:

The method with following header shall be compliant to its definition in the API.

Normal execution

CRRN1: a following call to isEventSet() method with the same event id shall answer true for the applet.

CRRN2: the SIM Toolkit Framework shall trigger the applet if an occurrence of the set event happens.

CRRN3: this method shall accept all the events defined in GSM 0319 excepted: EVENT_MENU_SELECTION, EVENT_MENU_SELECTION_HELP_REQUEST, EVENT_TIMER_EXPIRATION, EVENT_STATUS_COMMAND

Parameters error

CRRP1: shall throw a ToolkitException with EVENT_NOT_SUPPORTED reason if event is 0.

CRRP2: shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if event is EVENT_MENU_SELECTION.

CRRP3: shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if event is EVENT_MENU_SELECTION_HELP_REQUEST.

CRRP4: shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if event is EVENT_TIMER_EXPIRATION.

CRRP5: shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if event is EVENT_STATUS_COMMAND.

Context errors

CRRC1: shall throw a ToolkitException with EVENT_ALREADY_REGISTERED if event is EVENT_CALL_CONTROL_BY_SIM but another applet is already registered to it.

CRRC2: shall throw a ToolkitException with EVENT_ALREADY_REGISTERED if event is EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM but another applet is already registered to it.

6.2.9.12.2 Test suite files

Test Script: API_2_TKR_SEVTB_1.scr

Test Applet: API_2_TKR_SEVTB_1.java

-----API_2_TKR_SEVTB_2.java

Load Script: API_2_TKR_SEVTB_1.ldr

The load script installs the 2 instances.

Cleanup script: API_2_TKR_SEVTB_1.clr

Parameter File: API_2_TKR_SEVTB_1.par

6.2.9.12.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
1	Applet 1 is triggered by ENVELOPE(SMS_		•
	PP_FORMATTED) command.	Applet 1 shall be triggered	
	Send ENVELOPE(SMS_PP_FORMATTED)		
2	Setting ALLOWED and SUPPORTED events		
	1- For all events defined in GSM 0319 (from 1 to 19) and allowed: EVENT_PROFILE_DOWNLOAD, EVENT_FORMATTED_SMS_PP_ENV, EVENT_FORMATTED_SMS_PP_UPD,		
	EVENT_UNFORMATTED_SMS_PP_ENV,		
	EVENT_UNFORMATTED_SMS_PP_UPD, EVENT_UNFORMATTED_SMS_CB, EVENT_CALL_CONTROL_BY_SIM,	1.1- No exception shall be thrown.	
	EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM, EVENT_EVENT_DOWNLOAD_MT_CALL, EVENT_EVENT_DOWNLOAD_CALL_CONNECTED,	1.2- Shall return false.	
	EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS,	1.3- No exception shall be	
	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY, EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABL E,	thrown. 1.4- Shall return true.	
	EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION, EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION	1.5- No exception shall be	
	EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION. 1.1- clearEvent(event)	thrown.	
	1.2- isEventSet(event)		
	1.3- setEvent(event)		
	1.4- isEventSet(event)		
	1.5- clearEvent(event)		
3	Call setEvent(0)	Shall throw a ToolkitException with EVENT_NOT_SUPPORTED reason code.	
4	Setting EVENT_MENU_SELECTION		
	Call setEvent(EVENT_MENU_SELECTION)	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason code.	
5	Setting EVENT_MENU_SELECTION_HELP_REQUEST	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason	
	Call setEvent(EVENT_MENU_SELECTION_HELP_REQUES T)	code.	
6	Setting EVENT_TIMER_EXPIRATION	Chall throw a Tablist Cycantian with	
	Call setEvent(EVENT_TIMER_EXPIRATION)	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason code.	
7	Setting EVENT_STATUS_COMMAND Call setEvent(EVENT_STATUS_COMMAND)	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason code.	
8	Setting EVENT_CALL_CONTROL_BY_SIM Call setEvent(EVENT_CALL_CONTROL_BY_SIM)	No Exception shall be thrown	
	CALL SCENCIFC (EVENT_CADE_CONTROL_DI_SIM)	1)	

9	Setting EVENT_MO_SHORT_MESSAGE_CONTROL_B Y_SIM Call setEvent(EVENT_MO_SHORT_MESSAGE_CONTROL_B Y_SIM)	No Exception shall be thrown	
10	Check applet is triggered by an ENVELOPE(CALL_CONTROL_BY_SIM) Trigger the applet	Applet is trigged by an ENVELOPE(CALL_CONTROL_BY_SIM)	
11	Check applet is triggered by an ENVELOPE(MO_SHORT_MESSAGE_CONTRO L_BY_SIM) Trigger the Applet	Applet is trigged by an ENVELOPE(MO_SHORT_MESSAG E_CONTROL_BY_SIM)	
12	Applet 2 is triggered by ENVELOPE(SMS_ PP_DOWNLOAD) command. Trigger the applet 2	Applet 2 is trigged by an ENVELOPE(SMS_ PP_DOWNLOAD) command	
13	Applet 2 registers to CALL_CONTROL_BY_SIM but it is already assigned setEvent(EVENT_CALL_CONTROL_BY_SIM)	Shall throw a ToolkitException with EVENT_ALREADY_REGISTERED reason code.	
14	Applet 2 registers to MO_MESSAGE_CONTROL_BY SIM but it is already assigned setEvent(EVENT_MO_SHORT_MESSAGE_CONTROL_B Y_SIM)	Shall throw a ToolkitException with EVENT_ALREADY_REGISTERED reason code.	

6.2.9.12.4 Test Coverage

CRR number	Test case number
N1	2
N2	1, 8,9,10, 11, 12
N3	1, 8,9,10, 11, 12 2,4,5,6,7
P1	3
P2	4
P3	5
P4	6
P5	7
C1	13
C2	14

6.2.9.13 Method setEventList

Test Area Reference: API_2_TKR_SEVL_BSS

6.2.9.13.1 Conformance Requirement:

The method with following header shall be compliant to its definition in the API.

public void setEventList(byte[] eventList,

short offset,
short length)

throws java.lang.NullPointerException,

 ${\tt java.lang.ArrayIndexOutOfBoundsException,}$

ToolkitException

Normal execution

CRRN1: for all events set successfully by this method, a call to isEventSet() method should return true.

CRRN2: the SIM Toolkit Framework shall trigger the applet if an occurrence of one of the successfully registered events happens.

CRRN3: this method shall accept all the events defined in GSM 0319 excepted: EVENT_MENU_SELECTION, EVENT_MENU_SELECTION_HELP_REQUEST, EVENT_TIMER_EXPIRATION, EVENT_STATUS_COMMAND.

Parameters error

CRRP1: shall throw a java.lang.NullPointerException if eventList is null.

CRRP2: shall throw a java.lang.ArrayIndexOutOfBoundsException if offset would cause access outside array bounds.

CRRP3: shall throw a java.lang.ArrayIndexOutOfBoundsException if length would cause access outside array bounds.

CRRP4: shall throw a java.lang.ArrayIndexOutOfBoundsException if both offset and length would cause access outside array bounds.

CRRP5: shall throw a ToolkitException with EVENT_NOT_SUPPORTED reason if event is 0.

CRRP6: shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if eventList contains EVENT_MENU_SELECTION.

CRRP7: shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if eventList contains EVENT_MENU_SELECTION_HELP_REQUEST.

CRRP8: shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if eventList contains EVENT_TIMER_EXPIRATION.

CRRP9: shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if eventList contains EVENT_STATUS_COMMAND.

Context errors

CRRC1: shall throw a ToolkitException with EVENT_ALREADY_REGISTERED if eventList contains EVENT_CALL_CONTROL_BY_SIM but another applet is already registered to it.

CRRC2: shall throw a ToolkitException with EVENT_ALREADY_REGISTERED if eventList contains EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM but another applet is already registered to it.

6.2.9.13.2 Test suite files

Test Script: API_2_TKR_SEVL_BSS_1.scr

Test Applet: API_2_TKR_-SEVL_BSS-_1.java

-----API_2_TKR_-SEVL_BSS-_2.java

Load Script: API_2_TKR_-SEVL_BSS_1.ldr

———The load script installs the 2 instances.

Cleanup script: API_2_TKR_-SEVL_BSS_1.clr

Parameter File: API 2 TKR SEVL BSS 1.par

6.2.9.13.3 Test Procedure

ld	Description		API Expectation	APDU Expectation
1	Applet 1 Registering all eventList buffer	1-	No exception shall be	
	<pre>EventList = all allowed events defined in GSM 0319: EVENT_PROFILE_DOWNLOAD, EVENT_FORMATTED_SMS_PP_ENV, EVENT_FORMATTED_SMS_PP_UPD,</pre>	thrown. 2- thrown.	No exception shall be	

EVERT_CONSIDERATION_SMS_PP_BRV, PURPY_CONSTRUCTORS PURPY_CONSTRUCT					
EVENT_INFORMATTED_SES_PE_DED, EVENT_CALL_CONTROL_BY_SIM, FORT SEARCH_CONTROL_BY_SIM, FOR all events in eventList instruction = all allowed events defined in GSM 0315 (see test case 1). 1 - For each event in EventList clearEvent(event) 2 - Registering part of eventList clearEvent(event) 3 - For all events in eventList clearEvent(event) 1 - No exception shall be thrown. 2 - No exception shall be thrown. 3 - For each event in EventList clearEvent(event) 3 - For all events in eventList: instruction = all events in eventList instruction = all events in event in		EVENT_FORMATTED_SMS_CB,	3-	Each time shall return	
EVENT_INFORMATED_SMS_CP, PI_IDFO, EVENT_CALL_CONTROL_PS_SIM, EVENT_CALL_CONTROL_PS_SIM, EVENT_EVENT_DOMINOAD_NCT_CALL, EVENT_DOWINOAD_NCT_CALL, EVENT_DOWINOAD_NCT_CALL_CONTROL_PS_SIM, EVENT_EVENT_DOWINOAD_NCT_CALL_CONTROL_PS_SIM, EVENT_EVENT_DOWINOAD_NCT_CALL_PS_SIM,		EVENT_UNFORMATTED_SMS_PP_ENV,	true.		
EVENT_CALL_CONTROL_EX_SIN, EVENT_EVENT_DOBRICAD_NT_CALL_CONSECTED, EVENT_EVENT_DOBRICAD_NT_CALL_CONSECTED, EVENT_EVENT_DOBRICAD_CALL_DISCURNACTED, EVENT_EVENT_DOBRICAD_CALL_DISCURNACTED, EVENT_EVENT_DOBRICAD_CALL_DISCURNACTED, EVENT_EVENT_DOBRICAD_CALL_DISCURNACTED, EVENT_EVENT_DOBRICAD_CALR_EXELECTION, EVENT_EVENT_DOBRICAD_CARR_EXELECTION, EVENT_EVENT_TOURD.CARR_EXELECTION, EVENT_EVENT_TOURD.CARR_EXELECTION, EVENT_EVENT_TOURD.CARR_EXELECTION, EVENT_EVENT_		EVENT_UNFORMATTED_SMS_PP_UPD,			
by the Power Lowest and Date (Lower to Leve Line) The Power Lower		EVENT_UNFORMATTED_SMS_CB,	١,	Nie ausentien ehellike	
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GSM 0319 (see test case 1).		9 9 р			
GSM 0319 (see test case 1).		EventList = all allowed events defined in			
1- For each event in EventList clearEvent(event) 2- setEventList(eventList, offset, length) Offset > 0 Length = eventList.lentgh - offset 3- For all events in eventList: isEventSet(event) 4- For each event in EventList: clearEvent(event) 3- For all events in eventList: isEventSet(event) 4- For each event in EventList: clearEvent(event) 3- Each time shall return true for events ranging from offset to offset+length else shall return false. 4- No exception shall be thrown. Shall throw a java.lang.NullPointerException Exception Exception 4- Out of bounds offset Offset = eventList.length Length = 1 Out of bounds and big offset Offset = 255 Length = 1 Offset < 0 Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception Offset = -1 Length = 1 Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception			4	No exception shall be	
1- For each event in EventList clearEvent(event) 2- setEventList(event) 2- setEventList(eventList, offset, length) 3- Each time shall return true for events ranging from offset to offset+length else shall return false. 3- For all events in eventList:		obii obiy (bee cebe cabe i).		No exception shall be	
clearEvent(event) 2- setEventList(eventList, offset, length) Offset > 0 Length = eventList.lentgh - offset 3- For all events in eventList: isEventSet(event) 4- For each event in EventList: clearEvent(event) 3		1- For each event in Eventlist	thrown.		
2- setEventList(eventList, offset, length)					
length) Offset > 0 Length = eventList.lentgh - offset 3- For all events in eventList: isEventSet(event) 4- For each event in EventList: clearEvent(event) 3			2- No exception sha	No exception shall be	
Offset > 0 Length = eventList.lentgh - offset 3- For all events in eventList: isEventSet(event) 4- For each event in EventList: clearEvent(event) 4- Out of bounds offset Offset = eventList.length Length = 1 Shall throw a java.lang.NullPointerException Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception				rto oxtoophorr orion bo	
Length = eventList.lentgh - offset 3 - For all events in eventList: isEventSet(event) 4 - For each event in EventList: clearEvent(event) 4 - Out of bounds offset Offset = eventList.length Length = 1 5 - Out of bounds and big offset Offset = 255 Length = 1 Offset = 0 Offset = -1 Length = 1 Length = Out of bounds length Tor events ranging from offset to offset the length else shall return false. 4 - No exception shall be thrown. 4 - No exception shall be thrown. 5 - Out of bounds offset Shall throw a java.lang.NullPointerException Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception 7 - Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds Exception		length)	unown.		
Length = eventList.lentgh - offset 3 - For all events in eventList: isEventSet(event) 4 - For each event in EventList: clearEvent(event) 4 - Out of bounds offset Offset = eventList.length Length = 1 5 - Out of bounds and big offset Offset = 255 Length = 1 Offset = 0 Offset = -1 Length = 1 Length = Out of bounds length Tor events ranging from offset to offset the length else shall return false. 4 - No exception shall be thrown. 4 - No exception shall be thrown. 5 - Out of bounds offset Shall throw a java.lang.NullPointerException Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception 7 - Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds Exception			l_		
3- For all events in eventList: isEventSet(event) 4- For each event in EventList: clearEvent(event) 3			-		
3- For all events in eventList: isEventSet(event) 4- For each event in EventList: clearEvent(event) 3		Length = eventList.lentgh - offset	for even	ts ranging from offset to	
3			offset+le	ength else shall return false.	
thrown. Shall throw a java.lang.NullPointerException		<pre>3- For all events in eventList:</pre>			
thrown. Shall throw a java.lang.NullPointerException			4	No expension shall be	
4- For each event in EventList: clearEvent(event) Shall throw a java.lang.NullPointerException Exception 4 Out of bounds offset Offset = eventList.length Length = 1		<pre>isEventSet(event)</pre>		no exception shall be	
ClearEvent(event)			thrown.		
3		<pre>4- For each event in EventList:</pre>			
EventList = null java.lang.NullPointerException 4		<pre>clearEvent(event)</pre>			
EventList = null java.lang.NullPointerException 4					
EventList = null java.lang.NullPointerException 4					
EventList = null java.lang.NullPointerException 4	વ	Null huffer	O		
Exception 4 Out of bounds offset Offset = eventList.length Length = 1 Shall throw a java.lang.ArrayIndexOutOfBounds Exception 5 Out of bounds and big offset Offset = 255 Length = 1 Shall throw a java.lang.ArrayIndexOutOfBounds Exception 6 Offset < 0 Shall throw a java.lang.ArrayIndexOutOfBounds Exception 7 Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds Exception	٦	Hull bullet			
Exception 4 Out of bounds offset Offset = eventList.length Length = 1 Shall throw a java.lang.ArrayIndexOutOfBounds Exception 5 Out of bounds and big offset Offset = 255 Length = 1 Shall throw a java.lang.ArrayIndexOutOfBounds Exception 6 Offset < 0 Shall throw a java.lang.ArrayIndexOutOfBounds Exception 7 Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds Exception		Eventligt - null	java.lan	g.NullPointerException	
4 Out of bounds offset Offset = eventList.length Length = 1 5 Out of bounds and big offset Offset = 255 Length = 1 Offset < 0 Offset = -1 Length = 1 Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception 7 Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception		EACHERTSC - HATT			
Shall throw a java.lang.ArrayIndexOutOfBounds Exception 5		Out of bounds offers	1		
Offset = eventList.length Length = 1 Out of bounds and big offset Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception Offset = 255 Length = 1 Offset < 0 Shall throw a java.lang.ArrayIndexOutOfBounds Exception Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception	4	Out of bounds offset	Shall the	row a	
Length = 1 Exception		055			
5 Out of bounds and big offset Offset = 255 Length = 1 Offset < 0 Offset = -1 Length = 1 Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception 7 Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds Exception		-			
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Shall throw a java.lang.ArrayIndexOutOfBounds Exception 6 Offset = -1 Length = 1 Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception					
Offset = 255 Length = 1 Offset < 0 Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds	5	Out of bounds and big offset			
Length = 1 Coffset < 0 Offset = -1 Length = 1 Cout of bounds length Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds					
Length = 1 Coffset < 0 Offset = -1 Length = 1 Cout of bounds length Exception Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds		Offset = 255	java.lan	g.ArrayIndexOutOfBounds	
6 Offset < 0 Offset = -1 Length = 1 Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds		Length = 1			
Shall throw a offset = -1 Length = 1 Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds			<u></u> ' '	<u></u>	
Shall throw a offset = -1 Length = 1 Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds Exception Shall throw a java.lang.ArrayIndexOutOfBounds	6	Offset < 0			
offset = -1 Length = 1 Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds java.lang.ArrayIndexOutOfBounds			Shall thr	ow a	
Length = 1 Cut of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds		Offset = -1			
7 Out of bounds length Shall throw a java.lang.ArrayIndexOutOfBounds					
java.lang.ArrayIndexOutOfBounds		nenaen - I	Exception	ות	
java.lang.ArrayIndexOutOfBounds		Out of hounds law of	Ob - 11 11		
	/	Out of bounds length			
Offset = 0 Exception		Offset = 0	Exception	on	
					<u> </u>

	Length = eventList.length + 1		
8	Out of bounds and big length Offset = 0 Length = 255	Shall throw a java.lang.ArrayIndexOutOfBounds Exception	
	Longth + O		
9	Length < 0 Offset = 0 Length = -1	Shall throw a java.lang.ArrayIndexOutOfBounds Exception	
10	Out of bounds offset + Length Offset + length > eventList.length + 1	Shall throw a java.lang.ArrayIndexOutOfBounds Exception	
11	Event 0	Liception	
	Call setEventList(eventList) with eventList indicating event 0	Shall throw a ToolkitException with EVENT_NOT_SUPPORTED reason code.	
12	EVENT_MENU_SELECTION Call setEventList(eventList) with eventList indicating EVENT_MENU_SELECTION	Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED.	
13	EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList(eventList) with eventList indicating EVENT_MENU_SELECTION_HELP_REQUEST	Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED.	
14	EVENT_TIMER_EXPIRATION		
	Call setEventList(eventList) with eventList indicating EVENT_TIMER_EXPIRATION	Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED.	
15	EVENT_STATUS_COMMAND Call setEventList(eventList) with eventList indicating EVENT_STATUS_COMMAND	Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED.	
16	Setting EVENT_CALL_CONTROL_BY_SIM		
	<pre>setEventList(List, 0, 2) with List containing EVENT_CALL_CONTROL_BY_SIM & EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM</pre>	Shall not throw an exception	
17	Check applet is triggered by an ENVELOPE(CALL_CONTROL_BY_SIM) Reset and initialise the card Trigger the applet	Applet is trigged by an ENVELOPE(CALL_CONTROL_BY _SIM)	
18	Check applet is triggered by an ENVELOPE(MO_SHORT_MESSAGE_CONTROLBY_SIM) Trigger the applet	Applet is trigged by an ENVELOPE(MO_SHORT_MESSA GE_CONTROL_BY_SIM)	
19	Applet 2 registers to CALL_CONTROL_BY_SIM but it is already assigned setEventList(MonoEventList,0,1) with MonoEventList containing EVENT_CALL_CONTROL_BY_SIM	Shall throw a ToolkitException with EVENT_ALREADY_REGISTERED reason code.	
20	Applet 2 registers to MO_SHORT_MESSAGE_CONTROL_BY_SIM but it is already assigned setEventList(MonoEventList,0,1) with MonoEventList containing EVENT_MO_SHORT_MESSAGE_CONTROL_BY _SIM	Shall throw a ToolkitException with EVENT_ALREADY_REGISTERED reason code.	

6.2.9.13.4

Test Coverage

CRR number	Test case number
N1	1,2
N2	16,17,18
N3	1,2,11, 12,13,14,15
P1	3
P2	4,5,6
P3	7,8,9
P4	10
P5	11
P6	12
P7	13
P8	14
P9	15
C1	19
C2	20

6.2.10 Class ViewHandler

It is not possible to test the methods provided by this class as it is declared 'abstract'; it will be done in the class inheriting it: EditHandler, EnvelopeHandler, ProactiveResponseHandler, ProactiveHandler.

6.2.11 Class ToolkitException

- 6.2.11.1 Exception Constants

Test Area Reference: API_2_TKE_CONS

6.2.11.1.1 Conformance requirement:

There is no API, only constants.

Normal execution

CRRN1: The Constants of the class ToolkitException shall all have the same name and value defined in the GSM03.19.

Parameters error

No requirements

Context errors

No requirements

6.2.11.1.2 Test suite files

None

6.2.11.1.3 Test procedure

The constants in Java are resolved at compilation time, therefore a runtime test is not useful. No test of constants will be performed.

- 6.2.11.2 Constructor ToolkitException

Test Area Reference: API_2_TKE_COORS

6.2.11.2.1 Conformance requirement:

The constructor with following headershall compliant to its definition in the API.

public ToolkitException(short reason)

Normal execution

CRRN1: Construct a ToolkitException instance with the specified reason.

Parameters error

No requirements

Context errors

No requirements

6.2.11.2.2 Test suite files

No additional requirements for the GSM personalisation:

Test Script: API_2_TKE-_COORS_1.scr

Test Applet: API_2_TKE-_COORS_1.java

Load Script: API_2_TKE-_COORS_1.ldr

Cleanup script: API_2_TKE-_COORS_1.clr

Parameter File: API 2 TKE COORS 1.par

6.2.11.2.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	reason = (short) 19	ToolkitException.getReason() = (short)19	

6.2.11.2.4 Test Coverage

CRR number	Test case number
N1	1

6.2.11.3 Method throwlt

Test Area Reference: API_2_TKE_THITS

6.2.11.3.1 Conformance requirement:

The method with following header shall compliant to its definition in the API.

Normal execution

CRRN1: Throws the JCRE instance of the ToolkitException class with the specified reason.

CRRN2: extends javacard.framework.CardRuntimeException

Parameters error

No requirements

Context errors

No requirements

6.2.11.3.2 Test suite files

No additional requirements for the GSM personalisation:

Test Script: API_2_TKE_-THITS_1.scr

Test Applet: API_2_TKE_-THITS_1.java

Load Script: API_2_TKE_-THITS_1.ldr

Cleanup Script: API_2_TKE_THITS_1.clr

Parameter File: API_2_TKE_THITS_1.par

6.2.11.3.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Throws the JCRE instance of ToolkitException	Reason = 0	
	with the specified reason		
2	Throws the JCRE instance of ToolkitException	Reason = 1	
	with the specified reason		
3	Throws the JCRE instance of ToolkitException	Reason = 15	
	with the specified reason		
4	ToolkitException extends	Reason = 0	
	javacard.framework.CardRuntimeException		
5	ToolkitException extends	Reason = 1	
	javacard.framework.CardRuntimeException		
6	ToolkitException extends	Reason = 15	
	javacard.framework.CardRuntimeException		

6.2.11.3.4 Test Coverage

CRR number	Test case number
N1	1, 2, 3
N2	4, 5, 6

6.3 SIM Toolkit Framework

6.3.1 Minimum Handler Availability

This test area tests the rules that define the minimum requirements for the availability of the system handlers.

6.3.1.1 ProactiveHandler

Test Area Reference: FWK_MHA_-PAHD

6.3.1.1.1 Conformance Requirement

Normal Execution

CRRN1: If a proactive session is not ongoing the ProactiveHandler is available from the invocation to the termination of the processToolkit method for the following events:

EVENT_FORMATTED_SMS_PP_ENV

EVENT_UNFORMATTED_SMS_PP_ENV

EVENT_FORMATTED_SMS_CB

EVENT_UNFORMATTED_SMS_CB

EVENT_MENU_SELECTION

EVENT_MENU_SELECTION_HELP_REQUEST

EVENT_TIMER_EXPIRATION

EVENT_EVENT_DOWNLOAD_MT_CALL

EVENT_EVENT_DOWNLOAD_CALL_CONNECTED

EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED

EVENT_EVENT_DOWNLOAD_LOCATION_STATUS

EVENT_EVENT_DOWNLOAD_USER_ACTIVITY

EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE

EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS

EVENT EVENT DOWNLOAD LANGUAGE SELECTION

EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION

EVENT_UNRECOGNIZED_ENVELOPE

EVENT_STATUS_COMMAND

EVENT_CALL_CONTROL

EVENT_SMS_MO_CONTROL

EVENT PROFILE DOWNLOAD

6.3.1.1.2 Test Suite Files

Test Script: FWK_MHA_-PAHD_1.scr

Test Applet: FWK_MHA_-PAHD_1.java

FWK_MHA_PAHD_2.java

Load Script: FWK_MHA_-PAHD_1.ldr

Cleanup Script: FWK_MHA_-PAHD_1.clr

Parameter File: FWK_MHA_-PAHD_1.par

6.3.1.1.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applets registration to all events and Proactive Handler availability with EVENT_PROFILE_DOWNLOAD		
	Applet1 is registered to all events defined in [7]. Using the methods initMenuEntry () for EVENT_MENU_SELECTION, requestPollInterval () for EVENT_STATUS_COMMAND, allocateTimer () for EVENT_TIMER_EXPIRATION and setEventList () for the rest of the events.		
	Applet2 is registered to all events defined in [7], except EVENT_CALL_CONTROL_BY_SIM and EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM. Using the methods initMenuEntry () for EVENT_MENU_SELECTION, requestPollInterval	1- Applet1 is triggered	
	<pre>() for EVENT_STATUS_COMMAND, allocateTimer () for EVENT_TIMER_EXPIRATION and setEventList () for the rest of the events.</pre>	·	
		3- Applet2 is triggered	
	The priority of applet1 is higher than priority of applet2 1-Terminal Profile command is sent to SIM without the facility of SET_EVENT_LIST, POLL_INTERVAL,SET UP IDLE MODE TEXT and SET UP MENU.	4- No exception is thrown	
	2-Applet1 gets the Proactive Handler Applet1 is deregistered to EVENT_PROFILE_DOWNLOAD		
	3-Applet2 gets the Proactive Handler Applet2 is deregistered to EVENT_PROFILE_DOWNLOAD	Applet1 finalizes	
2	Proactive Handler availability with EVENT_MENU_SELECTION_HELP_REQUEST		
	Perform SIM initialization with all the facilities supported	1- Applet1 is triggered	
	1-Envelope menu selection with help request is sent to the SIM	2- No exception is thrown	
	2-Applet1 gets the Proactive Handler		
	3-Envelope menu selection with help request is sent to the SIM	Applet1 finalizes	
	4-Applet2 gets the Proactive Handler	3- Applet2 is triggered	
		4- No exception is thrown	

ld	Description	API /Framework Expectation	APDU Expectation
3	Proactive Handler availability with		
	EVENT_MENU_SELECTION		
	1-Envelope many galaction is gent to the	1- Applet1 is triggered	
	1-Envelope menu selection is sent to the SIM		
		2- No exception is thrown.	
	2-Applet1 gets the Proactive Handler	·	
	2 inpriest gees the frodestive name of		
	2 80000100000000000000000000000000000000	Applet1 finalizes	
	3-Envelope menu selection is sent to the SIM		
		3- Applet2 is triggered	
	4-Applet2 gets the Proactive Handler		
	4-Applet2 gets the Floactive Handler		
		4- No exception is thrown.	
4	Proactive Handler availability with	14- NO exception is thown.	
	EVENT_FORMATTED_SMS_PP_ENV		
		1- Applet1 is triggered	
	1-Envelope dataDownLoad formatted is sent to the SIM		
	co cue pri	2- No exception is thrown.	
	0.7007.041.0040.43.75	2- NO exception is tillown.	
	2-Applet1 gets the Proactive Handler		
		Applet1 finalizes	
	3-Envelope dataDownLoad formatted is sent to the SIM	O ArrilatO in triumana d	
	to the Sim	3- Applet2 is triggered	
	4-Applet2 gets the Proactive Handler		
		4- No exception is thrown.	
5	Proactive Handler availability with EVENT_UNFORMATTED_SMS_PP_ENV		
	EVENT_UNFORMATTED_SMS_PP_ENV	1- Applet1 is triggered	
	1-Envelope dataDownLoad unformatted is		
	sent to the SIM		
		2. No expention is through	
	2-Applet1 gets the Proactive Handler	2- No exception is thrown.	
		Applet1 finalizes	
		3- Applet2 is triggered	
	3-Applet2 gets the Proactive Handler		
		4- No exception is thrown.	
<u>6</u>	Proactive Handler availability with	,	
	EVENT FORMATTED CELL BROADCAST		
	1-Envelope cell broadcast formatted is	1- Applet1 is triggored	
	sent to the SIM	1- Applet1 is triggered	
	O analysis who has been also as all		
	2-Applet1 gets the Proactive Handler		
		2-No exception is thrown	
	3-Envelope cell broadcast formatted is	Applet1 finalizes	
	sent to the SIM	3-Applet2 is triggered	
	4.2.1.0		
	4-Applet2 gets the Proactive Handler		
		4-No exception is thrown	
	Burnetter Handle 19.199 99		
<u>7</u> 6	Proactive Handler availability with EVENT_UNFORMATTED_CELL BROADCAST		
	LVLINI_UNI UNIVIALI IED_CELL BRUADCASI	1- Applet1 is triggered	
	1-Envelope cell broadcast unformatted is	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	sent to the SIM		
			<u> </u>

ld	Description	API /Framework Expectation	APDU Expectatio
	2-Applet1 gets the Proactive Handler	2- No exception is thrown	
		Applet1 finalizes	
	3-Applet2 gets the Proactive Handler	3- Applet2 is triggered	
		4- No exception is thrown	

ld	Description	API /Framework Expectation	APDU Expectation
<u>8</u> 7	Proactive Handler availability with EVENT_TIMER_EXPIRATION		
	1-Timer Id =1	1- Applet1 is triggered	
	Envelope Timer Expiration is sent to the SIM	2- No exception is thrown.	
	2-Applet1 gets the Proactive Handler 3-Timer id=2	Applet1 finalizes	
	Envelope Timer Expiration is sent to the SIM	3- Applet2 is triggered	
	4- Applet2 gets the Proactive Handler	4- No exception is thrown	
<u>9</u> 8	Proactive Handler availability with EVENT_CALL_CONTROL_BY_SIM		
	1-Envelope call control by SIM is sent to the SIM	1- Applet1 is triggered	
	2-Applet1 gets the Proactive Handler	2- No exception is thrown.	
<u>10</u> 9	Proactive Handler availability with		
	EVENT_MO_SHORT_MESSAGE_CONTROL 1-Envelope mo short message control by SIM is sent to the SIM	1- Applet1 is triggered	
	2-Applet1 gets the Proactive Handler	2- No exception is thrown	
114 0	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_MT_CALL 1-Envelope event download mt call is sent to the SIM	1- Applet1 is triggered	
	2-Applet1 gets the Proactive Handler	2- No exception is thrown.	
		Applet1 finalizes	
	3-Applet2 gets the Proactive Handler	3- Applet2 is triggered	
		4- No exception is thrown	
<u>12</u> 4 4	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED		
	1-Envelope event download call connected is sent to the SIM	1- Applet1 is triggered	
	2-Applet1 gets the Proactive Handler	2- No exception is thrown.	
	3-Applet2 gets the Proactive Handler	Applet1 finalizes	
	TITLE STEE SHE TECHNOLIVE MANAGET	3- Applet2 is triggered	
101	December Herritage and P. 199	4- No exception is thrown	
134 2	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_DISCONN ECTED	1- Applet1 is triggered	
	1-Envelope event download call disconnected is sent to the SIM	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

ld	Description	API /Framework Expectation	APDU Expectation
	2-Applet1 gets the Proactive Handler		<u>=</u>
		Applet1 finalizes	
	3-Applet2 gets the Proactive Handler	3- Applet2 is triggered	
		4- No exception is thrown.	

ld	Description	API /Framework Expectation	APDU Expectation
141 3	Applets triggering with EVENT_EVENT_LOCATION_STATUS		•
	1-Envelope event download location status is sent to the SIM	1- Applet1 is triggered	
	2-Applet1 gets the Proactive Handler	2- No exception is thrown.	
		Applet1 finalizes	
	3-Applet2 gets the Proactive Handler	3- Applet2 is triggered	
		4- No exception is thrown	
1 <u>5</u> 4 4	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_USER_ACTIVITY		
	1-Envelope event download user activity is sent to SIM	1- Applet1 is triggered	
	2-Applet1 gets the Proactive Handler	2- No exception is thrown	
		Applet1 finalizes	
	3-Applet2 gets the Proactive Handler	3- Applet2 is triggered	
		4- No exception is thrown	
<u>16</u> 4 5	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_ AVAILABLE	1- Applet1 is triggered	
	1-Envelope event download idle screen available is sent to the SIM	· · · · · · · · · · · · · · · · · · ·	
	2-Applet1 gets the Proactive Handler	2- No exception is thrown.	
		Applet1 finalizes	
	3- Applet2 gets the Proactive Handler	3- Applet2 is triggered	
		4- No exception is thrown	
1 <u>7</u> 4 6	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CARD_READER _STATUS		
	1-Envelope event download card reader status is sent to the SIM	1- Applet1 is triggered	
	2-Applet1 gets the Proactive Handler	2- No exception is thrown.	
		Applet1 finalizes	
	3-Applet2 gets the Proactive Handler	3- Applet2 is triggered	
10	Processive Handley eveilebility with	4- No exception is thrown	
<u>18</u>	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_LANGUAGE_SE LECTION		
	1-Envelope event download language	1- Applet1 is triggered	
	selection is sent to the SIM	2-No exception is thrown.	

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ld	Description	API /Framework Expectation	APDU Expectation
		Applet1 finalizes Applet2 is triggered	
		Appletz is triggered	
	3-Applet2 gets the Proactive Handler		
		3-No exception is thrown	
<u>19</u>	Proactive Handler availability with EVENT EVENT DOWNLOAD BROWSER TER		
	MINATION		
		1- Applet1 is triggered	
	1-Envelope event download browser termination is sent to the SIM		
		2-No exception is thrown.	
	2-Applet1 gets the Proactive Handler		
		Applet1 finalizes	
		Applet2 is triggered	
	3-Applet2 gets the Proactive Handler		
		3-No exception is thrown	
<u>20</u> 4	Proactive Handler availability with		
7	EVENT_STATUS_COMMAND	1- Applet1 is triggered	
	1-Status command is sent to the SIM	, Applet is inggered	
		2. No exponition in the same	
	2-Applet1 gets the Proactive Handler	2- No exception is thrown.	
		Applet1 finalizes	
	3- Applet2 gets the Proactive Handler	3- Applet2 is triggered	
		4- No exception is thrown.	
<u>21</u> 4	Proactive Handler availability with		
8	UNRECOGNIZED_ENVELOPE	1- Applet1 is triggered	
	1-An unrecognized Envelope (BER TLV Tag	1- Applet 1 is triggered	
	unrecognized) is sent to the SIM		
	2-Applet1 gets the Proactive Handler	2- No exception is thrown.	
		Applet1 finalizes	
		Applet Illializes	
	3-Applet2 gets the Proactive Handler	3- Applet2 is triggered	
		4- No exception is thrown	

6.3.1.1.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1,2,3,4,5,6,7,8,9,10,11,12,
	13,14,15,16,17,18 <u>,19,20,21</u>

6.3.1.2 ProactiveResponseHandler

Test Area Reference: FWK_MHA_-PRHD

6.3.1.2.1 Conformance Requirement

Normal Execution

CRRN1: The ProactiveResponseHandler is available after the first call to the ProactiveHandler.send method to the termination of the processToolkit method for the following events:

EVENT_FORMATTED_SMS_PP_ENV

EVENT_UNFORMATTED_SMS_PP_ENV

EVENT_FORMATTED_SMS_CB

EVENT_UNFORMATTED_SMS_CB

EVENT MENU SELECTION

EVENT_MENU_SELECTION_HELP_REQUEST

EVENT_TIMER_EXPIRATION

EVENT_EVENT_DOWNLOAD_MT_CALL

EVENT_EVENT_DOWNLOAD_CALL_CONNECTED

EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED

EVENT_EVENT_DOWNLOAD_LOCATION_STATUS

EVENT EVENT DOWNLOAD USER ACTIVITY

EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE

EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS

EVENT EVENT DOWNLOAD LANGUAGE SELECTION

EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION

EVENT_UNRECOGNIZED_ENVELOPE

EVENT_STATUS_COMMAND

EVENT_CALL_CONTROL

EVENT_SMS_MO_CONTROL

EVENT PROFILE DOWNLOAD

6.3.1.2.2 Test Suite Files

Test Script: FWK_MHA_-PRHD_1.scr

Test Applet: FWK_MHA_-PRHD_1.java

FWK_MHA_PRHD_2.java

Load Script: FWK_MHA_-PRHD_1.ldr

Cleanup Script: FWK_MHA_-PRHD_1.clr

Parameter File: FWK_MHA_-PRHD_1.par

6.3.1.2.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applets registration to all events and Proactive Response Handler availability with EVENT_PROFILE_DOWNLOAD		
	1- Applet1 is registered to all events defined in [7], applet2 is registered to		

ld	Description	API/Framework Expectation	APDU Expectation
	all events defined in [7] except EVENT_CALL_CONTROL_BY_SIM and EVENT_MO_SMS_CONTROL_BY_SIM. Using the methods initMenuEntry() for EVENT_MENU_SELECTION, requestPollInterval() for EVENT_STATUS_COMMAND, allocateTimer() for EVENT_TIMER_EXPIRATION and setEventList() for the rest of the events.		
	1-Terminal Profile command is sent to the SIM without the facility of SET_EVENT_LIST and POLL_INTERVAL, ,SET UP IDLE MODE TEXT and SET UP MENU.	1-Applet1 is triggered No exception is thrown	
	Applet1 builds a proactive command DISPLAY TEXT. 2- ProactiveHandler.send() method is		2- The proactive command DISPLAY TEXT is fetched
	called	3- No exception is thrown	TERMINAL RESPONSE
	3- ProactiveResponseHandler.getTheHandler() method is called Applet1 is deregistered to EVENT_PROFILE_DOWNLOAD Applet1 execution is finished	Applet1 finalizes 4- Applet2 is triggered	
	Applet2 builds a proactive command DISPLAY TEXT. 4- ProactiveHandler.send() method is called		5- The proactive command DISPLAY TEXT is fetched TERMINAL RESPONSE
	5- ProactiveResponseHandler.getTheHandler() method is called Applet1 is deregistered to EVENT_PROFILE_DOWNLOAD	6- No exception is thrown	

ld	Description	API/Framework Expectation	APDU Expectation
2	Proactive Response Handler availability with		
-	EVENT MENU SELECTION HELP REQUEST		
	Perform SIM initialization with all the		
	facilities supported		
	1-Envelope menu selection with help	4. Appletd is triangled	
	request is sent to the SIM	1- Applet1 is triggered	
	Applet1 builds a proactive command DISPLAY		
	TEXT		
	2- ProactiveHandler.send() method is		
	called		2- A proactive command
			DISPLAY TEXT is fetched
			TERMINAL RESPONSE
	3-	3- No exception is thrown	TERMINAL RESI SINGE
	ProactiveResponseHandler.getTheHandler()	·	
	method is called	Applet1 finalizes	
	Envelope menu selection with help request	4. Applet2 is trices and	
	is sent to the SIM	4- Applet2 is triggered	
	Applet2 builds a proactive command DISPLAY		
	TEXT		5- A proactive command
	4- ProactiveHandler.send() method is		DISPLAY TEXT is fetched
	called		TED. 111.11 DESPONSE
		6. No expention is thrown	TERMINAL RESPONSE
		6- No exception is thrown	
	5-		
	<pre>ProactiveResponseHandler.getTheHandler() method is called</pre>		
3	Proactive Response Handler availability with		
	EVENT_MENU_SELECTION		
	1-Envelope menu selection is sent to the	1- Applet1 is triggered	
	SIM		
	Applet1 builds a proactive command DISPLAY		
	TEXT		
	2- ProactiveHandler.send() method is		2- A proactive command
	called		DISPLAY TEXT is fetched
1			TERMINAL RESPONSE
1	3-ProactiveResponseHandler.getTheHandler()	3- No exception is thrown	
	method is called	3- No exception is thrown	
	Applet1 execution is finished		
	T-FF 201 CACCACTON ID TIMEDICA	Applet1 finalizes	
	4-Envelope menu selection is sent to the		
1	SIM	4- Applet2 is triggered	
1			
1			
	Applet2 builds a proactive command DISPLAY TEXT		
	TEAT		
	5- ProactiveHandler.send() method is		5- A proactive command
	called		DISPLAY TEXT is fetched
1			TED. 40.14. DE05.000
1			TERMINAL RESPONSE
	6-ProactiveResponseHandler.getTheHandler()		
	method is called	1	<u> </u>

ld	Description	API/Framework Expectation	APDU Expectation
		6- No exception is thrown	
4	Proactive Response Handler availability with EVENT_FORMATTED_SMS_PP_ENV		
	1-Envelope dataDownLoad formatted is sent to the SIM	1- Applet1 is triggered	
	Applet builds a proactive command DISPLAY TEXT		
	2-ProactiveHandler.send() method is called		2- A proactive command DISPLAY TEXT is fetched
	3-ProactiveResponseHandler.getTheHandler() method is called	3- No exception is thrown	TERMINAL RESPONSE
	Applet1 execution is finished	Applet1 finalizes	
	4-Envelope dataDownLoad formatted is sent to the SIM	4- Applet2 is triggered	
	Applet2 builds a proactive command DISPLAY TEXT		
	5-ProactiveHandler.send() method is called		5- A proactive command DISPLAY TEXT is fetched
	6-ProactiveResponseHandler.getTheHandler() method is called		TERMINAL RESPONSE
5	Proactive Response Handler availability with EVENT_UNFORMATTED_SMS_PP_ENV	6- No exception is thrown	
	1-Envelope dataDownLoad unformatted is sent to the SIM	1- Applet1 is triggered	
	Applet1 builds a proactive command DISPLAY TEXT		
	2- ProactiveHandler.send() method is called		2- A proactive command DISPLAY TEXT is fetched
			TERMINAL RESPONSE
	3- ProactiveResponseHandler.getTheHandler() method is called	3- No exception is thrown	
	Appletl execution is finished	Applet1 finalizes	
	Applet2 builds a proactive command DISPLAY		
	4- ProactiveHandler.send() method is called	4- Applet2 is triggered	5- A proactive command DISPLAY TEXT is fetched
	5- ProactiveResponseHandler.getTheHandler()		TERMINAL RESPONSE
	method is called		
		6- No exception is thrown	

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6	Description	API/Framework Expectation	APDU Expectation
	Proactive Response Handler availability with EVENT_UNFORMATTED_SMS _CB		
	1-Envelope call broadcast unformatted is sent to the SIM	1- Applet1 is triggered	
	Applet1 builds a proactive command DISPLAY TEXT		
	2-ProactiveHandler.send() method is called		2- A proactive command DISPLAY TEXT is fetched
	3-ProactiveResponseHandler.getTheHandler() method is called.	3- No exception is thrown	TERMINAL RESPONSE
	Applet1 execution is finished	Applet1 finalizes	
	Applet2 builds a proactive command DISPLAY TEXT	4- Applet2 is triggered	E. A projective command
	4- ProactiveHandler.send() method is called		5- A proactive command DISPLAY TEXT is fetche
	5- ProactiveResponseHandler.getTheHandler() method is called		TERMINAL RESPONSE
7	Proactive Response Handler availability with EVENT UNFORMATTED SMS CB	6- No exception is thrown	
	1-Envelope call broadcast unformatted is		
	sent to the SIM	1- Applet1 is triggered	
		1- Applet1 is triggered	
	sent to the SIM Applet1 builds a proactive command DISPLAY	1- Applet1 is triggered	2- A proactive command DISPLAY TEXT is fetche
	Applet1 builds a proactive command DISPLAY TEXT	3- No exception is thrown	DISPLAY TEXT is fetche
	<pre>sent to the SIM Applet1 builds a proactive command DISPLAY TEXT 2- ProactiveHandler.send() method is called 3-ProactiveResponseHandler.getTheHandler()</pre>		DISPLAY TEXT is fetche
	Applet1 builds a proactive command DISPLAY TEXT 2- ProactiveHandler.send() method is called 3-ProactiveResponseHandler.getTheHandler() method is called. Applet2 builds a proactive command DISPLAY TEXT	3- No exception is thrown Applet1 finalizes	DISPLAY TEXT is fetched TERMINAL RESPONSE
	Applet1 builds a proactive command DISPLAY TEXT 2- ProactiveHandler.send() method is called 3-ProactiveResponseHandler.getTheHandler() method is called. Applet2 builds a proactive command DISPLAY	3- No exception is thrown Applet1 finalizes	DISPLAY TEXT is fetched TERMINAL RESPONSE 5- A proactive command DISPLAY TEXT is fetched
	Applet1 builds a proactive command DISPLAY TEXT 2-ProactiveHandler.send() method is called 3-ProactiveResponseHandler.getTheHandler() method is called. Applet2 builds a proactive command DISPLAY TEXT 4- ProactiveHandler.send() method is	3- No exception is thrown Applet1 finalizes 4- Applet2 is triggered	DISPLAY TEXT is fetched TERMINAL RESPONSE 5- A proactive command DISPLAY TEXT is fetched
<u>8</u> 7	Applet1 builds a proactive command DISPLAY TEXT 2- ProactiveHandler.send() method is called 3-ProactiveResponseHandler.getTheHandler() method is called. Applet2 builds a proactive command DISPLAY TEXT 4- ProactiveHandler.send() method is called 5- ProactiveResponseHandler.getTheHandler()	3- No exception is thrown Applet1 finalizes	

ld	Description	API/Framework Expectation	APDU Expectation
	Applet builds a proactive command DISPLAY TEXT		
	2-ProactiveHandler.send() method is called		2- A proactive command DISPLAY TEXT is fetched
			TERMINAL RESPONSE
	3-ProactiveResponseHandler.getTheHandler() method is called		
	Applet1 execution is finished	3- No exception is thrown	
	Timer id=2 Envelope Timer Expiration is sent to the SIM	Applet1 finalizes	
	Applet builds a proactive command DISPLAY TEXT	4- Applet2 is triggered	
	4-ProactiveHandler.send() method is called		
		5- No exception is thrown	
	5-ProactiveResponseHandler.getTheHandler() method is called		6- A proactive command
	Applet2 execution is finished		DISPLAY TEXT is fetched
			TERMINAL RESPONSE
<u>9</u> 8	Proactive Response Handler availability with EVENT_CALL_CONTROL_BY_SIM		
	1-Envelope call control by sim is sent to the SIM	1- Applet1 is triggered	
	Applet builds a proactive command DISPLAY TEXT		
	2-ProactiveHandler.send() method is called		
			2- A proactive command DISPLAY TEXT is fetched
	3-ProactiveResponseHandler.getTheHandler()		TERMINAL RESPONSE
	method is called	3- No exception is thrown	
9 10	Proactive Response Handler availability with _ MO_SHORT_MESSAGE_CONTROL_BY_SIM		
	1-Envelope mo short message control by sim is sent to the SIM	1- Applet1 is triggered	
	Applet builds a proactive command DISPLAY TEXT		
	2-ProactiveHandler.send() method is called		2- A proactive command DISPLAY TEXT is fetched

ld	Description	API/Framework Expectation	APDU Expectation
			TERMINAL RESPONSE
	3-ProactiveResponseHandler.getTheHandler()	3- No exception is thrown	
	method is called	10- NO exception is thrown	
	Applet1 execution is finished		
444	Proactive Response Handler availability with		
114 0	EVENT_EVENT_DOWNLOAD_MT_CALL		
	1-Envelope event download mt call is sent	1- Applet1 is triggered	
	to the SIM	1- Applett is triggered	
	Applet1 builds a proactive command DISPLAY		
	TEXT		
	2-ProactiveHandler.send() method is called		
			2- A proactive command DISPLAY TEXT is fetched
	3-ProactiveResponseHandler.getTheHandler()		DIOI EXT TEXT IO TOLOTICA
	method is called.		TERMINAL RESPONSE
	Applet1 execution is finished	3- No exception is thrown	
		Applet1 finalizes	
		Applett finalizes	
	Applet2 builds a proactive command DISPLAY		
	TEXT	4- Applet2 is triggered	
	4- ProactiveHandler.send() method is		
	called		5- A proactive command DISPLAY TEXT is fetched
			DISPLAY TEXT IS returned
	5-		TERMINAL RESPONSE
	ProactiveResponseHandler.getTheHandler()		
	method is called		
		6- No exception is thrown	
121 1	Proactive Response Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT		
	ED		
	1 Envelope event devaled call connected	4. Appletd is triangued	
	1-Envelope event download call connected is sent to the SIM	1- Applet1 is triggered	
	Applet1 builds a proactive command DISPLAY TEXT		
	2-ProactiveHandler.send() method is called		2- A proactive command DISPLAY TEXT is fetched
			DIOI EXT TEXT IO TOLORIO
	3-ProactiveResponseHandler.getTheHandler()		TERMINAL RESPONSE
	method is called	3- No exception is thrown	
	Applet1 execution is finished	·	
		Applet1 finalizes	
	Applet builds a proactive command DISPLAY TEXT	4- Applet2 is triggered	
		FF990.00	
	4- ProactiveHandler.send() method is called		5- A proactive command DISPLAY TEXT is fetched
			DISPLAT TEXT IS TEXTINED
			TERMINAL RESPONSE

ld	Description	API/Framework Expectation	APDU Expectation
	5- ProactiveResponseHandler.getTheHandler() method is called		
101		6- No exception is thrown	
134 2	Proactive Response Handler availability with EVENT_EVENT_DOWNLOAD_CALL_DISCONN ECTED		
	1-Envelope event download call disconnected is sent to the SIM	1- Applet1 is triggered	
	Applet1 builds a proactive command DISPLAY TEXT		
	2-ProactiveHandler.send() method is called		2- A proactive command DISPLAY TEXT is fetched
	3-ProactiveResponseHandler.getTheHandler()		TERMINAL RESPONSE
	method is called Applet1 execution is finished	3- No exception is thrown	
	Applet2 builds a proactive command DISPLAY	Applet1 finalizes	
	TEXT 4- ProactiveHandler.send() method is called	4- Applet2 is triggered	
	5- ProactiveResponseHandler.getTheHandler() method is called	6- No exception is thrown	5- A proactive command DISPLAY TEXT is fetched TERMINAL RESPONSE
144	Proactive Response Handler availability with	0-140 exception is thrown	
	EVENT_EVENT_DOWNLOAD_CALL_CONNECT EDLOCATION_STATUS		
	1-Envelope event download location status is sent to the SIM	1- Applet1 is triggered	
	Applet1 builds a proactive command DISPLAY TEXT		
	2-ProactiveHandler.send() method is called		2-A proactive command DISPLAY TEXT is fetched
			TERMINAL RESPONSE
	3-ProactiveResponseHandler.getTheHandler() method is called	3- No exception is thrown	
	Appletl execution is finished	Applet1 finalizes	
	Applet2 builds a proactive command DISPLAY	4- Applet2 is triggered	
	IFAI		

ld	Description	API/Framework Expectation	APDU Expectation
	4- ProactiveHandler.send() method is called		5- A proactive command DISPLAY TEXT is fetched
	5-	6- No exception is thrown	TERMINAL RESPONSE
	ProactiveResponseHandler.getTheHandler() method is called		
154 4	Proactive Response Handler availability with EVENT_EVENT_DOWNLOAD_USER_ACTIVITY		
	1-Envelope event download user activity is sent to the SIM	1- Applet1 is triggered	
	Applet1 builds a proactive command DISPLAY TEXT		
	2-ProactiveHandler.send() method is called		2-A proactive command DISPLAY TEXT is fetched
	3-ProactiveResponseHandler.getTheHandler() method is called	3- No exception is thrown	TERMINAL RESPONSE
	Applet1 execution is finished	Applet1 finalizes	
	Applet2 builds a proactive command DISPLAY TEXT	4- Applet2 is triggered	
	4- ProactiveHandler.send() method is called		5- A proactive command DISPLAY TEXT is fetched
			TERMINAL RESPONSE
	5- ProactiveResponseHandler.getTheHandler() method is called		
		6- No exception is thrown	
16 1 5	Proactive Response Handler availability with EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_ AVAILABLE		
	1-Envelope event download idle screen available is sent to the SIM	1- Applet1 is triggered	
	Applet1 builds a proactive command DISPLAY TEXT		
	2-ProactiveHandler.send() method is called		2- A proactive command DISPLAY TEXT is fetched
			TERMINAL RESPONSE
	3-ProactiveResponseHandler.getTheHandler() method is called	3- No exception is thrown	
	Appletl execution is finished	Applet1 finalizes	
		4- Applet2 is triggered	
	Applet2 builds a proactive command DISPLAY TEXT		
	4- ProactiveHandler.send() method is called		5- A proactive command DISPLAY TEXT is fetched

ld	Description	API/Framework Expectation	APDU Expectation
			TERMINAL RESPONSE
	5-		
	ProactiveResponseHandler.getTheHandler()		
	method is called	6- No exception is thrown	

ld	Description	API/Framework Expectation	APDU Expectation
16	Proactive Response Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT		
	ED		
	1-Envelope event download card reader	1- Applet1 is triggered	
	status is sent to the SIM	T Tippiot Tio triggorou	
	Applet1 builds a proactive command DISPLAY TEXT		
	2 ProactiveHandler.send() method is called		
			2-A proactive command DISPLAY TEXT is fetched
			TERMINAL RESPONSE
	3 ProactiveResponseHandler.getTheHandler()	3- No exception is thrown	
	method is called		
	Applet1 execution is finished	4- Applet2 is triggered	
		The state of the s	
	Turnlot 2 builds a muscative samual DIGDIAN		
	Applet2 builds a proactive command DISPLAY TEXT		5 A
	4- ProactiveHandler.send() method is		5- A proactive command DISPLAY TEXT is fetched
	called		TERMINAL RESPONSE
	5-		TERMINAL RESPONSE
	ProactiveResponseHandler.getTheHandler() method is called	6- No exception is thrown	
<u>17</u>	Proactive Response Handler availability with		
	EVENT EVENT DOWNLOAD LANGUAGE SELECTION		
	1-Envelope event download language	1 Applet1 is triggered	
	selection is sent to the SIM	1- Applet1 is triggered	
	Applet1 builds a proactive command DISPLAY TEXT		
	2-ProactiveHandler.send() method is called		
			2-A proactive command DISPLAY TEXT is fetched
			TERMINAL RESPONSE
	3-ProactiveResponseHandler.getTheHandler()		
	method is called		
		3-No exception is thrown	
		Applet1 finalizes	
	Applet2 builds a proactive command DISPLAY	Applet2 is triggered	
	Applet2 builds a proactive command DISPLAY TEXT		
	4- ProactiveHandler.send() method is		
	called		
	5-		
	ProactiveResponseHandler.getTheHandler() method is called		4-A proactive command DISPLAY TEXT is fetched
	meeriod is carred		
			TERMINAL RESPONSE

ld	Description	API/Framework Expectation	APDU Expectation
		5-No exception is thrown	
<u>18</u>	Proactive Response Handler availability with EVENT EVENT DOWNLOAD BROWSER TERMINATION		
	1-Envelope event download Browser termination is sent to the SIM	1- Applet1 is triggered	
	Applet1 builds a proactive command DISPLAY TEXT		
	2-ProactiveHandler.send() method is called		2-A proactive command DISPLAY TEXT is fetched
			TERMINAL RESPONSE
	3-ProactiveResponseHandler.getTheHandler() method is called		
		3-No exception is thrown	
		Applet1 finalizes	
	Applet2 builds a proactive command DISPLAY TEXT	Applet2 is triggered	
	4- ProactiveHandler.send() method is called		
	5- ProactiveResponseHandler.getTheHandler() method is called		4-A proactive command DISPLAY TEXT is fetched
			TERMINAL RESPONSE
9 7	Proactive Response Handler availability with EVENT_STATUS_COMMAND	5-No exception is thrown	
	1-Status command is sent to the SIM	1- Applet1 is triggered	
	Applet1 builds a proactive command DISPLAY TEXT		
	2-ProactiveHandler.send() method is called		2- A proactive command DISPLAY TEXT is fetched
			TERMINAL RESPONSE
	3-ProactiveResponseHandler.getTheHandler() method is called	3- No exception is thrown	
	Applet1 execution is finished	Applet1 finalizes	
	Applet2 builds a proactive command DISPLAY	4- Applet2 is triggered	
	TEXT		5- A proactive command DISPLAY TEXT is fetched

ld	Description	API/Framework Expectation	APDU Expectation
			TERMINAL RESPONSE
	5- ProactiveResponseHandler.getTheHandler() method is called	6- No exception is thrown	
<u>0</u> 4 8	Proactive Response Handler availability with UNRECOGNIZED_ENVELOPE		
	1-An unrecognized Envelope is sent to the SIM	1- Applet1 is triggered	
	Applet1 builds a proactive command DISPLAY		
	2-ProactiveHandler.send() method is called		2- A proactive command DISPLAY TEXT is fetched
			TERMINAL RESPONSE
	3-ProactiveResponseHandler.getTheHandler() method is called Applet1 execution is finished	3- No exception is thrown	
		Applet1 finalizes	
	Applet2 builds a proactive command DISPLAY TEXT	4- Applet2 is triggered	5- A proactive command DISPLAY TEXT is fetched
	4- ProactiveHandler.send() method is called		TERMINAL RESPONSE
	5-		
	ProactiveResponseHandler.getTheHandler() method is called	6- No exception is thrown	

6.3.1.2.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1,2,3,4,5,6,7,8,9,10,11,12,13,
	14,15,16,17,18 <u>,19,20</u>

6.3.1.3 EnvelopeHandler

Test Area Reference: FWK_MHA_-ENHD

6.3.1.3.1 Conformance Requirement

Normal Execution

CRRN1: The EnvelopeHandler and its content are available for all toolkit applets triggered from the invocation to the termination of their processToolkit method for the following events:

EVENT_FORMATTED_SMS_PP_ENV

EVENT_UNFORMATTED_SMS_PP_ENV

EVENT FORMATTED SMS CB

EVENT_UNFORMATTED_SMS_CB

EVENT_MENU_SELECTION

EVENT_MENU_SELECTION_HELP_REQUEST

EVENT_TIMER_EXPIRATION

EVENT_EVENT_DOWNLOAD_MT_CALL

EVENT_EVENT_DOWNLOAD_CALL_CONNECTED

EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED

EVENT_EVENT_DOWNLOAD_LOCATION_STATUS

EVENT_EVENT_DOWNLOAD_USER_ACTIVITY

EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE

EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS

EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION

EVENT EVENT DOWNLOAD BROWSER TERMINATION

EVENT_UNRECOGNIZED_ENVELOPE

EVENT_CALL_CONTROL

EVENT_SMS_MO_CONTROL

Context Errors

CRRC1: The EnvelopeHandler and its content are not available for any toolkit applet triggered from the invocation to the termination of their processToolkit method for the following events:

EVENT_STATUS_COMMAND

EVENT_PROFILE_DOWNLOAD

6.3.1.3.2 Test Suite Files

Test Script: FWK_MHA_-ENHD_1.scr

Test Applet: FWK_MHA_-ENHD_1.java

FWK_MHA_ENHD_2.java

Load Script: FWK_MHA_ENHD_1.ldr

Cleanup Script: FWK_MHA_-ENHD_1.clr

Parameter File: FWK_MHA_ENHD_1.par

6.3.1.3.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet1 and Applet2 registration and Envelope Handler availability with EVENT_PROFILE_DOWNLOAD		
	EVENT_I NOTICE_DOWNEDAD		
	1- Applet1 is registered to all events defined [7]. Using the methods initMenuEntry() for EVENT_MENU_SELECTION, requestPollInterval() for EVENT_STATUS_COMMAND, allocateTimer() for EVENT_TIMER_EXPIRATION and setEventList() for the rest of the events.		
	Applet2 is registered to all events defined [7] except EVENT_CALL_CONTROL_BY_SIM and EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM. Using the methods initMenuEntry() for EVENT_MENU_SELECTION, requestPollInterval() for EVENT_STATUS_COMMAND, allocateTimer for EVENT_TIMER_EXPIRATION and setEventList for the rest of the events.	1- No exception is thrown	
	2-Terminal Profile command is sent to SIM without the facility of SET_EVENT_LIST ,SETUP_IDLE_MODE_TEXT ,POLL_INTERVAL and SETUP MENU	2- Applet1 is triggered	
	3-EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 is deregistered to EVENT_PROFILE_DOWNLOAD	3- A Toolkit exception HANDLER_NOT_AVAILABLE is thrown	
		4- Applet2 is triggered	
	4-EnvelopeHandler.getTheHandler() method is called by Applet2 Applet2 is deregistered to EVENT_PROFILE_DOWNLOAD	5- A Toolkit exception HANDLER_NOT_AVAILABLE is thrown	
2	Envelope Handler availability with EVENT_MENU_SELECTION_HELP_REQUEST		
	Perform SIM initialization with all the facilities supported		
	Envelope menu selection with help request is sent to the SIM	1- Applet1 is triggered	
	Applet1 is triggered 1-EnvelopeHandler.getTheHandler() method is called by Applet1	24- No exception is thrown. Applet1 finalizes.	
	2-Envelope menu selection with help request is sent to the SIM	Applet1 finalizes 32- Applet2 is triggered	
	3-EnvelopeHandler.getTheHandler() method is called by Applet2	43- No exception is thrown.	
3	Envelope Handler availability with EVENT_MENU_SELECTION		

ld	Description	API/Framework Expectation	APDU Expectation
	1-Envelope menu selection is sent to the SIM	1- Applet1 is triggered	
	2-EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 finalizes.	2- No exception is thrown. Applet1 finalizes	
	3-Envelope menu selection is sent to the SIM	3- Applet2 is triggered	
	4-EnvelopeHandler.getTheHandler() method is called by Applet2	4- No exception is thrown.	

ld	Description	API/Framework Expectation	APDU Expectation
4	Envelope Handler availability with EVENT_FORMATTED_SMS_PP_ENV	,	
	1-A EVENT_FORMATTED_SMS_PP_ENV envelope is sent to the SIM	1- Applet1 is triggered	
	2-EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown.	
	Applet1 finalizes.	Applet1 finalizes	
	3-A EVENT_FORMATTED_SMS_PP_ENV envelope is sent to the SIM	3- Applet2 is triggered	
	4-EnvelopeHandler.getTheHandler() method is called by Applet2	4- No exception is thrown.	
5	Envelope Handler availability with EVENT_UNFORMATTED_SMS_PP_ENV		
	1-An unformatted sms pp envelope is sent to the SIM	1- Applet1 is triggered	
	2-EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 finalizes.	2- No exception is thrown.	
		Applet1 finalizes	
	3-EnvelopeHandler.getTheHandler() method is called by Applet2	3- Applet2 is triggered	
		4- No exception is thrown.	
<u>6</u>	Envelope Handler availability with EVENT_FORMATTED_CB		
	1-Envelope cell broadcast formatted is sent to the SIM	1- Applet1 is triggered	
	2-EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 finalizes.	2-No exception is thrown	
	3- Envelope cell broadcast formatted is sent to the SIM	3- Applet2 is triggered	
	4-EnvelopeHandler.getTheHandler() method is called by Applet2	A New years from the discourse	
<u>7</u> 6	Envelope Handler availability with EVENT_UNFORMATTED_CB	4-No exception is thrown	
	1-Envelope cell broadcast unformatted is sent to the SIM	1- Applet1 is triggered	
	2-EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 finalizes.	2- No exception is thrown	
	2 EnvelopeHandler setTheHardler() wether	Applet1 finalizes	
	3-EnvelopeHandler.getTheHandler() method is called by Applet2	3- Applet2 is triggered	
		4- No exception is thrown	
<u>8</u> 7	Envelope Handler availability with		

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ld	Description	API/Framework Expectation	APDU Expectation
	EVENT_TIMER_EXPIRATION	·	•
	Timer id=1		
	1-mer Id=1 1-Envelope Timer Expiration is sent to the	1- Applet1 is triggered	
	SIM	1- Applett is triggered	
	2-EnvelopeHandler.getTheHandler() method	2- No exception is thrown.	
	is called by Applet1		
	Applet1 finalizes.	Applet1 finalizes	
		Applet Illanzes	
	Timer id=2		
	3-Envelope Timer Expiration is sent to the SIM		
		3- Applet2 is triggered	
	4-EnvelopeHandler.getTheHandler() method		
	is called by Applet2		
	Applet2 finalizes.	4- No exception is thrown.	
<u>9</u> 8	Envelope Handler availability with		
<u> </u>	EVENT_CALL_CONTROL_BY_SIM		
	1-Envelope call control by sim is sent to the SIM	1- Applet1 is triggered	
	2-EnvelopeHandler.getTheHandler() method		
	is called by Applet1	2- No exception is thrown.	
<u>0</u> 9	Envelope Handler availability with EVENT_MO_SHORT_MESSAGE_CONTROL_B		
	Y_SIM		
	_		
	1-Envelope mo short message control by sim is sent to the SIM		
	The serie co the sim	1- Applet1 is triggered	
	2-EnvelopeHandler.getTheHandler() method		
	is called by Applet1.		
		2- No exception is throw	
14	Envelope Handler availability with		
0	EVENT_EVENT_DOWNLOAD_MT_CALL		
	1-Envelope event download mt call is sent	1- Applet1 is triggered	
	to the SIM		
		2. No exponding in the same	
	2-EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown.	
	Applet1 finalizes.		
		Applet1 finalizes	
	3-EnvelopeHandler.getTheHandler() method	3- Applet2 is triggered	
	is called by Applet2	3- Applet2 is triggered	
		4- No exception is thrown.	
<u>2</u> 4	Envelope Handler availability with		
<u>2</u> 1 1	EVENT_EVENT_DOWNLOAD_CALL_CONNECT		
<u>2</u> 4 4	Envelope Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED		
<u>2</u> 4 4	EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED 1-Envelope event download call connected		
<u>2</u> 1 1	EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED		
<u>2</u> 4 4	EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED 1-Envelope event download call connected is sent to the SIM		
<u>2</u> 4 4	EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED 1-Envelope event download call connected		

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ld	Description	API/Framework Expectation	APDU Expectation
	3-EnvelopeHandler.getTheHandler() method is called by Applet2	Applet1 finalizes	
		3- Applet2 is triggered	
		4- No exception is thrown.	

ld	Description	API/Framework Expectation	APDU Expectation
<u>13</u> 4	Envelope Handler availability with		
2	EVENT_EVENT_DOWNLOAD_CALL_DISCONE CTTED		
	1-Envelope event download call disconnected is sent to the SIM	1- Applet1 is triggered.	
	2-EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 finalizes.	2- No exception is thrown.	
		Applet1 finalizes	
	3-EnvelopeHandler.getTheHandler() method is called by Applet2	3- Applet2 is triggered	
141 3	Envelope Handler availiability with EVENT_EVENT_DOWNLOAD_LOCATION_STA TUS	4- No exception is thrown.	
	1-Envelope event download location status is sent to the SIM	1- Applet1 is triggered	
	2-EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 finalizes.	2- No exception is thrown.	
		Applet1 finalizes	
	3-EnvelopeHandler.getTheHandler() method	3- Applet2 is triggered	
	is called by Applet2	4- No exception is thrown.	
<u>15</u> 4 4	Envelope Handler availiability with EVENT_EVENT_DOWNLOAD_USER_ACTIVITY		
	1-Envelope event download user activity is sent to the SIM		
	2-EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 finalizes.	2- No exception is thrown Applet1 finalizes	
	3-EnvelopeHandler.getTheHandler() method is called by Applet2	3- Applet2 is triggered	
<u>16</u> 4	Envelope Handler availability with	4- No exception is thrown	
	EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_ AVAILABLE		
	1-Envelope event download idle screen available is sent to the SIM	1- Applet1 is triggered	
	2-EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 finalizes.	2- No exception is thrown.	
		Applet1 finalizes	
	3-EnvelopeHandler.getTheHandler() method is called by Applet2	3- Applet2 is triggered	
		4- No exception is thrown.	
174 6	Envelope Handler availiability with EVENT_EVENT_DOWNLOAD_CARD_READER _STATUS	,	

ld	Description	API/Framework Expectation	APDU Expectation
	1-Envelope event download card reader status is sent to the SIM	1- Applet1 is triggered	
	2-EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 finalizes.	2- No exception is thrown. Applet1 finalizes	
	3-EnvelopeHandler.getTheHandler() method is called by Applet2	3- Applet2 is triggered	
		4- No exception is thrown.	

ld	Description	API/Framework Expectation	APDU Expectation
<u>18</u>	Envelope Handler availiability with EVENT EVENT DOWNLOAD LANGUAGE	·	•
	SELECTION		
	1-Envelope event download language selection is sent to the SIM	1- Applet1 is triggered	
	2-EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 finalizes.	2-No exception is thrown.	
		Applet1 finalizes	
	3-EnvelopeHandler.getTheHandler() method is called by Applet2	3- Applet2 is triggered	
		4- No exception is thrown.	
<u>19</u>	Envelope Handler availiability with EVENT_EVENT_DOWNLOAD_BROWSER_ TERMINATION		
	1-Envelope event download browser termination is sent to the SIM	1- Applet1 is triggered	
	2-EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 finalizes.	2-No exception is thrown.	
		Applet1 finalizes	
	3-EnvelopeHandler.getTheHandler() method is called by Applet2	3- Applet2 is triggered	
		4- No exception is thrown.	
204 7	Envelope Handler availability with EVENT_STATUS_COMMAND		
	1-Status command is sent to the SIM	1- Applet1 is triggered	
	2-EnvelopeHandler.getTheHandler() method is called by Applet1	2- A Toolkit exception HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes	
	3-EnvelopeHandler.getTheHandler() method is called by Applet2	3- Applet2 is triggered	
		4- A Toolkit exception HANDLER_NOT_AVAILABLE is thrown	
<u>21</u> 4 8	Envelope Handler availiability with EVENT_ UNRECOGNIZED_ENVELOPE		
	1-An unrecognized Envelope is sent to the SIM	1- Applet1 is triggered	
	2-EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 finalizes.	2- No exception is thrown.	
		Applet1 finalizes	
	3-EnvelopeHandler.getTheHandler() method is called by Applet2	3- Applet2 is triggered	

ld	Description	API/Framework Expectation	APDU Expectation
		4- No exception is thrown.	

6.3.1.3.4 Test Coverage

CRR Number	Test Case Number
CRRN1	2,3,4,5,6,7,8,9,10,11,12,13,14,
	15,16,17,18,19 ,20,21
CRRC1	1,2 <u>0,3,4,5,6,7,8,9,10,11,12,13</u>

6.3.2 Handler Integrity

6.3.2.1 ProactiveHandler

Test Area Reference: FWK_HIN_-PAHD

6.3.2.1.1 Conformance Requirement

Normal Execution

CRRN1: At the process Toolkit invocation the TLV-List is cleared.

CRRN2: After a call to ProactiveHandler.send method the handler will remain unchanged until the ProactiveHandler.init or appendTLV method are called.

6.3.2.1.2 Test Suite Files:

Test Script: FWK_HIN_-PAHD_1.scr

Test Applet: FWK_-HIN_-PAHD_1.java

FWK_HIN_PAHD_2.java

Load Script: FWK_-HIN_-PAHD_1.ldr

Cleanup Script: FWK_-HIN_-PAHD_1.clr

Parameter File: FWK_-HIN_-PAHD_1.par

6.3.2.1.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	At the processToolkit invocation the TLV-List is cleared		
	Applet1 and Applet2 are registered to EVENT_UNFORMATTED_SMS_PP_ENV.		
	1-An envelope containing an unformatted sms pp is sent to the SIM	1- Applet1 is triggered.	
	2-ProactiveHandler.getLength() method is called by Applet1	2- The return value is 0	
2	TLV-List change after the init method invocation		
	ProactiveHandler.init() method is called by Applet1		
	1-ProactiveHandler.getLength() method is called by Applet1	1- The return value is 9	
3	The TLV-List remains unchanged after the send() method invocation		
	1-ProactiveHandler.send() method is called by Applet1		1- The proactive command is fetched and the terminal response is issued.
	2-ProactiveHandler.getLength() method is called by Applet1	2- The return value is 9, and its contents is the same than before the calling to send method	response to todaca.
	It's checked that the content is the same than before the calling to send method using ProactiveHandler.copyValue and Util.arrayCompare methods		
	Applet1 finalizes		
4	At the processToolkit invocation the TLV-List is cleared		
		1- Applet2 is triggered	
	1-ProactiveHandler.getLength() method is called by Applet2	2- The return value is 0	
	2-ProactiveHandler.getValueLength() method is called by Applet2	3- ToolkitException UNAVAILABLE_ELEMENT is thrown	

6.3.2.1.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1, 2, 3, 4
CRRN2	3

6.3.2.2 ProactiveResponseHandler

Test Area Reference: FWK_HIN_PRHD

6.3.2.2.1 Conformance Requirement

Normal Execution

CRRN1: The ProactiveResponseHandler content is changed after the call to ProactiveHandler.send method and remains unchanged until next call to the ProactiveHandler.send method.

CRRN2: The ProactiveResponseHandler may not be available before the first call to ProactiveHandler.send method, if available the content is cleared.

6.3.2.2.2 Test Suite Files

Test Script:	FWK_HINPRHD_1.scr		
Test Applet:	FWK_HIN_PRHD_1.java		
Load Script:	FWK_HIN_PRHD_1.ldr		
Cleanup Script:	FWK_HIN_PRHD_1.clr		
Parameter File:	FWK_HIN_PRHD_1.par		
6.3.2.2.3 Test Procedure FWK HIN PRHD 1.java			
Load Script:	FWK_HIN_PRHD_1.ldr		
Cleanup Script:	FWK HIN PRHD 1.clr		
Parameter File:	FWK_HIN_PRHD_1.par		

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet registration and ProactiveResponseHandler obtaining		
	·		
	1-Applet is registered to all events defined in [7].		
	Using the methods initMenuEntry for		
	<pre>EVENT_MENU_SELECTION, requestPollInterval() for</pre>		
	<pre>EVENT_STATUS_COMMAND, allocateTimer() for EVENT_TIMER_EXPIRATION and setEventList()</pre>	1- No exception is thrown	
	for the rest of the events.	1- No exception is thown	
	Terminal Profile command is sent to the		
	SIM without the facilitiesy of SET_EVENT_LIST ,SETUP_IDLE_MODE_TEXT,		
	SETUP_MENU and POLL_INTERVAL.	2. Applet is triggered	
		2- Applet is triggered.	
	For each event:	3- Behaviour 1:	
	2-ProactiveResponseHandler.getTheHandler()	Toolkit Exception HANDLER_NOT_AVAILABLE is	
	is called	thrown.	
		Behaviour 2:	
	76 handlan in andlahla	No exception is thrown, the return	
	If handler is available, ProactiveResponseHandler.getLength() is	value is 0	
	called		
2	The ProactiveResponseHandler remains		
	unchanged after send method invocation until next send method invocation		
	2 2002 2 100 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 T D .: D	
	1-Applet builds a proactive command ProactiveHandler.send() method is called	1- The ProactiveResponseHandler contains the terminal response	2- A proactive command is fetched
			The terminal response is se with length 12
			With longth 12
	2-ProactiveResponseHandler.getLength() method is called	3- The return value is 12	
	meerod is carred		
		4- No exception is thrown and the	
	3-ProactiveHandler.init() method is called	Proactive Response Handler	
		remains unchanged	
	4-ProactiveHandler.send() method is called	5- The ProactiveResponseHandler	6 A proportive comment !-
		contains the terminal response of the second proactive command	6- A proactive command is fetched
			The terminal response is se
			with length 15
	E PropativeDegrapageInteller	7- The return value is 15	
	5-ProactiveResponseHandler.getLength() method is called		

6.3.2.2.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1,2
CRRN2	1

6.3.2.3 EnvelopeHandler

Test Area Reference: FWK_HIN_-ENHD

6.3.2.3.1 Conformance Requirement

Normal Execution

CRRN1: The EnvelopeHandler and its content are available for all triggered toolkit applets, from the invocation to the termination of their processToolkit method.

CRRN2: The SIM Toolkit Framework guarantees that all triggered toolkit applets receive the data.

6.3.2.3.2 Test Suite Files

Test Script: FWK_HIN_-ENHD_1.scr Test Applet: FWK_HIN_ENHD_1.java **Load Script:** FWK_HIN_ENHD_1.ldr Cleanup Script: Parameter File: FWK_HIN_ENHD_1.par 6.3.2.3.3 Test Procedure FWK_HIN_ENHD_1.java Load Script: FWK HIN ENHD 1.ldr Cleanup Script: FWK HIN ENHD 1.clr Parameter File: FWK_HIN_ENHD_1.par

6.3.2.3.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet initialization and Envelope Handler integrity checks with EVENT_MENU_SELECTION_HELP_REQUEST		
	1- Applet is registered to all events defined in [7] except EVENT_PROFILE_DOWNLOAD and EVENT_STATUS_COMMAND. Using the methods initMenuEntry() for EVENT_MENU_SELECTION, allocateTimer()for EVENT_TIMER_EXPIRATION, and setEventList() for the rest of the events. Perform SIM initialization with all the facilities supported	1-No exception is thrown	
	2-Envelope menu selection with help request is sent to the SIM	2- Applet is triggered3-No exception is thrown.	
	3-EnvelopeHandler.getTheHandler() method is called	! ·	
	4-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	4-No exception is thrown	
	The EnvelopeHandler.findTLV() method is called with TAG_HELP_REQUEST		
	5-A proactive command DISPLAY TEXT is sent		5-91 xx.
	6-Envelope call control by sim is sent to SIM	6- Applet is triggered	

ld	Description	API/Framework Expectation	APDU Expectation
	EnvelopeHandler.getTheHandler() method is called		
	7- It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	7-No exception is thrown and the handler contains the envelope call control by SIM	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished.		
			A proactive command Display Text is fetched
			The terminal Response of DISPLAY TEXT is sent to the SIM
	Check that the TAG_HELP_REQUEST is the TLV selected		
	8-The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()	8-The contents of the envelope handler shall be the same as stored in buffer 1	
2	Envelope Handler integrity checks with EVENT_MENU_SELECTION		
	1-An envelope menu selection is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2-No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3-No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_ITEM_IDENTIFIER		
	4-A proactive command DISPLAY TEXT is sent		4-91 XX
	5-Envelope call control by sim is sent to SIM	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6- It's checked the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	6- No exception is thrown and the handler contains the envelope call control by SIM	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished.		Proactive command Displa Text is fetched The terminal Response of DISPLAY TEXT is sent to

ld	Description	API/Framework Expectation		APDU Expectation
			the	SIM
	It's checked that the TAG_ITEM_IDENTIFIER is the TLV selected			
		7- The contents of the envelope handler shall be the same as stored in buffer 1		

ld	Description	API/Framework Expectation	APDU Expectation
3	Envelope Handler integrity checks with EVENT_FORMATTED_SMS_PP_ENV	·	·
	1-A formatted sms pp envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2- No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_SMS_TPDU		
	4-A proactive command DISPLAY TEXT is sent		4- 91 XX
	5-Envelope call control by sim is sent to SIM	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare methods	6- No exception is thrown and the handler contains the envelope call control by SIM	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished.		
			Proactive command Displate Text is fetched The terminal Response of DISPLAY TEXT is sent to the SIM
	It's checked that the TAG_SMS_TPDU is the TLV selected		
	7- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()	7- The contents of the envelope handler shall be the same as stored in buffer 1	
4	Envelope Handler integrity checks with EVENT FORMATTED SMS CB		
	1-An envelope SMS-CB formatted according to [8] is sent to the SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2-No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3-No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_CELL_BROADCAST_PAGE		
	4-A proactive command DISPLAY TEXT is sent		
	5-Envelope call control by sim is sent to SIM	5- Applet is triggered	<u>4-91 XX</u>

ld	Description	API/Framework Expectation	APDU Expectation
	called 6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES Call Control execution is finished.	6- No exception is thrown and the handler contains the envelope call control by SIM	
	It's checked that the TAG_CELL_BROADCAST_PAGE is the TLV selected 7- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()		Proactive command Displa Text is fetched The terminal Response of DISPLAY TEXT is sent to the SIM

<u>ld</u> <u>5</u> 4	Description Envelope Handler integrity checks with EVENT_UNFORMATTED_SMS_PP_ENV	API/Framework Expectation	APDU Expectation
	1-A unformatted sms pp envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2- No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3- No exception is thrown.	
	The EnvelopeHandler.findTLV method is called with TAG_DEVICE_IDENTITIES		4- 91 XX
	4-A proactive command DISPLAY TEXT is sent		01700
	5-Envelope call control by sim is sent to SIM	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	6- No exception is thrown and the handler contains the envelope call control by SIM	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished.		
			Proactive command Displa Text is fetched
			The terminal Response of DISPLAY TEXT is sent to the SIM
	It's checked that the TAG_DEVICE_IDENTITIES is the TLV selected		
	7- The contents of EnvelopeHandler are compared with bufferl using Util.arrayCompare()	7- The contents of the envelope handler shall be the same as stored in buffer 1.	
<u>56</u>	Envelope Handler integrity checks with EVENT_UNFORMATTED_SMS_CB		
	1-A unformatted cellbroadcast envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2- No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_CELLBROADCAST_PAGE 4-A proactive command DISPLAY TEXT is sent	5- Applet is triggered	4- 91 XX
	5-Envelope call control by sim is sent to SIM	o Appiet is triggered	

ld	Description	API/Framework Expectation	APDU Expectation
	EnvelopeHandler.getTheHandler() method is called 6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy and Util.arrayCompare() methods The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES	6- No exception is thrown and the handler contains the envelope call control by SIM	•
	Call Control execution is finished.		Proactive command Displa Text is fetched The terminal Response of DISPLAY TEXT is sent to the SIM
	It's checked that the TAG_CELLBROADCAST_PAGE is the TLV selected 7- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()	7- The contents of the envelope handler shall be the same as stored in buffer 1.	

d 6	Description Envelope Handler integrity checks with	API/Framework Expectation	APDU Expectation
	EVENT_TIMER_EXPIRATION		
	1-A timer expiration envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2- No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_TIMER_ID		
	4-A proactive command DISPLAY TEXT is sent		4- 91 XX
	5-Envelope call control by sim is sent to SIM	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	6- No exception is thrown and the handler contains the envelope call control by SIM	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished.		D .: 15:
			Proactive command Dis Text is fetched
			The terminal Response DISPLAY TEXT is sent the SIM
	It's checked that the TAG_TIMER_IDE is the TLV selected		
	7- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()	7- The contents of the envelope handler shall be the same as stored in buffer 1	
<u>8</u>	Envelope Handler integrity checks with EVENT_CALL_CONTROL_BY_SIM		
	1-A call control envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2- No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_ADDRESS		
	4-A proactive command DISPLAY TEXT is sent		4- 91 XX
	5-Envelope call control by sim is sent to	5- Applet is triggered	

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ld	Description	API/Framework Expectation	APDU Expectation
	EnvelopeHandler.getTheHandler() method is called		
	6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	6- No exception is thrown and the handler contains the envelope call control by SIM	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished.		Proactive command Displa Text is fetched
			The terminal Response of DISPLAY TEXT is sent to the SIM
	It's checked that the TAG_ADDRESS is the TLV selected 7- The contents of EnvelopeHandler are compared with buffer1 using	7- The contents of the envelope handler shall be the same as stored in buffer 1	
<u>9</u> 8	Util.arrayCompare() Envelope Handler integrity checks with EVENT_		
	MO_SHORT_MESSAGE_CONTROL_BY_SIM		
	1-A mo short message control by sim envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2- No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_ADDRESS		4- 91 XX
	4-A proactive command DISPLAY TEXT is sent		
	5-Envelope call control by sim is sent to SIM	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	6- No exception is thrown and the handler contains the envelope call control by SIM	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished.		Proactive command Displa
			Text is fetched The terminal Response of DISPLAY TEXT is sent to
	It's checked that the TAG_ADDRESS is the		the SIM
	TLV selected 7- The contents of EnvelopeHandler are compared with bufferl using	7- The contents of the envelope handler shall be the same as stored	

ld	Description Util.arrayCompare()	API/Framework Expectation	APDU Expectation
910	Envelope Handler integrity checks with EVENT_	in buffer 1.	
	EVENT_DOWNLOAD_MT_CALL 1-A event download mt call envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2- No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_ADDRESS		
	4-A proactive command DISPLAY TEXT is sent		4- 91 XX
	5-Envelope call control by sim is sent to SIM	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	6- No exception is thrown and the handler contains the envelope call control by SIM	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished.		
	It's checked that the TAG_ADDRESS is the TLV selected		Proactive command Displa Text is fetched The terminal Response of DISPLAY TEXT is sent to the SIM
	7- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()	7- The contents of the envelope handler shall be the same as stored in buffer 1	
114 0	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_CALL_CONNECTED		
	1-A event download call connected envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2- No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_ADDRESS		4- 91 XX
	4-A proactive command DISPLAY TEXT is sent		 - - - - - - - - - - - - -

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ld	Description	API/Framework Expectation	APDU Expectation
	5-Envelope call control by sim is sent to	5- Applet is triggered	Al Do Expositation
	SIM	33	
	EnvelopeHandler.getTheHandler() method is		
	called		
	6-It's checked that the contents of the	6- No exception is thrown and the	
	envelope handler is the envelope call control using EnvelopeHandler.copy and	handler contains the envelope call	
	Util.arrayCompare() methods	control by SIM	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished.		
			Proactive command Displa
			Text is fetched
			The terminal Response of DISPLAY TEXT is sent to
			the SIM
			-
	It's checked that the TAG_ADDRESS is the TLV selected		
		7- The contents of the envelope handler shall be the same as stored	
	7- The contents of EnvelopeHandler are compared with buffer1 using	in buffer 1.	
	Util.arrayCompare()		
	Envelope Handler integrity checks with EVENT_		
4	EVENT_DOWNLOAD_CALL_DISCONNECTED		
	1-A event download call disconnected	1- Applet is triggered	
	envelope is sent to SIM	, , , pp.ot is uiggered	
	2-EnvelopeHandler.getTheHandler() method is	2- No exception is thrown.	
	called	2- No exception is thown.	
	3-Copy the contents of the envelope handler in buffer 1 using	2. No expendion is thrown	
	EnvelopeHandler.copy()	3- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is		
	called with TAG_ADDRESS		
	_		4- 91 XX
	4-A proactive command DISPLAY TEXT is sent		4- 31 ^^
	5-Envelope call control by sim is sent to	5- Applet is triggered	
	SIM		
	EnvelopeHandler.getTheHandler() method is called		
	6-It's checked that the contents of the envelope handler is the envelope call	6- No exception is thrown and the	
	control using EnvelopeHandler.copy and	handler contains the envelope call control by SIM	
	Util.arrayCompare() methods	Control by Silvi	
	The EnvelopeHandler.findTLV() method is		
	called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished.		
	The state of the s		
			Proactive command Displa
			Text is fetched
			The terminal Response of DISPLAY TEXT is sent to
			the SIM

ld	Description	API/Framework Expectation	APDU Expectation
	It's checked that the TAG_ADDRESS is the	,	,
	TLV selected 7- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()	7- The contents of the envelope handler shall be the same as stored in buffer 1.	
<u>13</u> 4	Envelope Handler integrity checks with EVENT_		
2	EVENT_DOWNLOAD_LOCATION_STATUS		
	1-A event download location status envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2- No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_LOCATION_STATUS		
	4-A proactive command DISPLAY TEXT is sent		4-91 XX
	5-Envelope call control by sim is sent to		
	SIM	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	6- No exception is thrown and the handler contains the envelope call control by SIM	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES	·	
	Call Control execution is finished.		
			Proactive command Displa Text is fetched
			The terminal Response of DISPLAY TEXT is sent to the SIM
	It's checked that the TAG_LOCATION_STATUS is the TLV selected		
	7- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()	7- The contents of the envelope handler shall be the same as stored in buffer 1	

ld	Description	API/Framework Expectation	APDU Expectation
	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_USER_ACTIVITY	API/Flamework Expectation	APDO Expectation
	1-A event download user activity envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2- No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	4-A proactive command DISPLAY TEXT is sent		4- 91 XX
	5-Envelope call control by sim is sent to SIM	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	6- No exception is thrown and the handler contains the envelope call control by SIM	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished.		Proactive command Displa Text is fetched
			The terminal Response of DISPLAY TEXT is sent to the SIM
	It's checked that the TAG_DEVICE_IDENTITIES is the TLV selected		
	7- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()	7- The contents of the envelope handler shall be the same as stored in buffer 1	
	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_IDLE_SCREEN_AVAILAB LE		
	1-A event download idle screen available envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2- No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	4-A proactive command DISPLAY TEXT is sent 5-Envelope call control by sim is sent to		4- 91 XX
	SIM	5- Applet is triggered	H- 31 VV
<u> </u>		I	I

ld	Description	API/Framework Expectation	APDU Expectation
	EnvelopeHandler.getTheHandler() method is called		
	6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	6- No exception is thrown and the handler contains the envelope call control by SIM	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished.		
			Proactive command Displa Text is fetched
			The terminal Response of DISPLAY TEXT is sent to the SIM
	It's checked that the TAG_DEVICE_IDENTITIES is the TLV selected		
	7- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()	7- The contents of the envelope handler shall be the same as stored in buffer 1	
164 5	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_CARD_READER_STATUS		
	1-A event download card reader status envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2- No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_CARD_READER_STATUS		
	4-A proactive command DISPLAY TEXT is sent		
	5-Envelope call control by sim is sent to SIM	5- Applet is triggered	4- 91 XX
	EnvelopeHandler.getTheHandler() method is called		
	6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy and Util.arrayCompare() methods	6- No exception is thrown and the	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES	handler contains the envelope call control by SIM	
			Proactive command Displa Text is fetched
			The terminal Response of
	It's checked that the TAG_CARD_READER_STATUS is the TLV selected		DISPLAY TEXT is sent to the SIM
	7- The contents of EnvelopeHandler are	7- The contents of the envelope	

ld	Description	API/Framework Expectation	APDU Expectation
		handler shall be the same as stored	
	Util.arrayCompare()	in buffer 1	

ld	Description	API/Framework Expectation	APDU Expectation
<u>17</u>	Envelope Handler integrity checks with EVENT EVENT DOWNLOAD LANGUAGE SEL ECTION	·	·
	1-A event download language selection envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2-No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3-No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_EVENT_LIST		
	4-A proactive command DISPLAY TEXT is sent		
	5-Envelope call control by sim is sent to SIM	5- Applet is triggered	<u>4-91 XX</u>
	EnvelopeHandler.getTheHandler() method is called		
	6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	6- No exception is thrown and the handler contains the envelope call control by SIM	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished.		
			Proactive command Displa Text is fetched The terminal Response of
			DISPLAY TEXT is sent to the SIM
	It's checked that the TAG_EVENT_LIST is the TLV selected		<u></u>
	7- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()	7- The contents of the envelope handler shall be the same as stored in buffer 1	
<u>18</u>	Envelope Handler integrity checks with EVENT EVENT DOWNLOAD BROWSER TERM INATION		
	1-A event download browser termination envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2-No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3-No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_EVENT_LIST		
	4-A proactive command DISPLAY TEXT is sent		
	5-Envelope call control by sim is sent to SIM	5- Applet is triggered	<u>4-91 XX</u>

ld	Description	API/Framework Expectation	APDU Expectation
	EnvelopeHandler.getTheHandler() method is called 6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES Call Control execution is finished.	6- No exception is thrown and the handler contains the envelope call control by SIM	
	It's checked that the TAG_EVENT_LIST is the TLV selected 7- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()	7- The contents of the envelope handler shall be the same as stored in buffer 1	Proactive command Displa Text is fetched The terminal Response of DISPLAY TEXT is sent to the SIM

ld	Description	API/Framework Expectation	APDU Expectation
191 6	Envelope Handler integrity checks with UNRECOGNIZED_ENVELOPE		
	1-A unrecognized envelope is sent to SIM	1- Applet is triggered	
	2-EnvelopeHandler.getTheHandler() method is called	2- No exception is thrown.	
	3-Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	3- No exception is thrown.	
	4-A proactive command DISPLAY TEXT is sent		
	5-Envelope call control by sim is sent to SIM	5- Applet is triggered	4- 91 XX
	EnvelopeHandler.getTheHandler() method is called The EnvelopeHandler.getValueLength() is called		
	6-It's checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	6- No exception is thrown and the handler contains the envelope call control by SIM	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished.		
			Proactive command Displa Text is fetched
			The terminal Response of DISPLAY TEXT is sent to the SIM
	7- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()	7- The contents of the envelope handler shall be the same as stored in buffer 1	

6.3.2.3.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1,2,3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16,17,18,19
CRRN2	1,2,3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16,17,18,19

6.3.3 Applet Triggering

- 6.3.3.1 EVENT_PROFILE_DOWNLOAD

Test Area Reference: FWK_APT_EPDW

6.3.3.1.1 Conformance Requirement

Normal Execution

CRRN1: Upon the reception of Terminal Profile command by the SIM, the STF stores the ME Profile and then triggers the registered toolkit applets.

CRRN2: The applet is not triggered by the EVENT_PROFILE_DOWNLOAD once it has deregistered from this event.

CRRN3: The STF shall not reply busy to a Terminal Profile command

6.3.3.1.2 Test Suite Files

Test Script: FWK_APT_EPDW_1.scr

Test Applet: FWK_APT_EPDW_1.java

FWK_APT_EPDW_2.java

FWK_APT_EPDW_3.java

Load Script: FWK_APT_EPDW_1.ldr

Cleanup Script: FWK_APT_EPDW_1.clr

Parameter File: FWK_APT_EPDW_1.par

6.3.3.1.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applets registration to EVENT_PROFILE_DOWNLOAD and triggering		
	Applet1 is registered to the EVENT_PROFILE_DOWNLOAD		
	Applet2 is registered to the EVENT_PROFILE_DOWNLOAD		
	Applet3 is not registered to the EVENT_PROFILE_DOWNLOAD and is registered to EVENT_FORMATTED_SMS_PP_ENV.		
	1-Terminal Profile command is sent to SIM	1- Applet1 is triggered	
	Appletl execution is finished	Applet1 finalizes 2- Applet2 is triggered	
	Applet2 execution is finished	Applet2 finalizes 3- Applet3 is not triggered	
2	The STF shall not reply busy to a Terminal Profile command		
	1-Formatted sms pp envelope is sent to SIM	1- Applet3 is triggered by the EVENT_FORMATTED_SMS_PP_ENV	
	Applet3 builds a REFRESH proactive command in sim initialization mode 2-ProactiveHandler.send() method is called by applet3		2- A proactive command is
		Applet3 is suspended until the terminal response	sent
	3-Terminal Profile command is sent to SIM	3- Applet1 is triggered by EVENT_PROFILE_DOWNLOAD	
	Applet1 calls Toolkit Registry.clearEvent(EVENT_PROFILE_DOWNLOAD)		
		Applet1 finalizes 4- Applet2 is triggered by	

ld	Description	API/Framework Expectation	APDU Expectation
	4-Applet2 calls Toolkit Registry.clearEvent(EVENT_PROFILE_DOWNLOAD) ToolkitRegistry.setEvent(EVENT_PROFILE_DOWNLOAD) method is called	EVENT_PROFILE_DOWNLOAD	The terminal Response of the proactive command is sent
	Applet3 execution finish	Applet2 finalizes Applet3 finalizes	
3	Deregistered applets are not triggered Terminal Profile command is sent to SIM	Applet3 is triggered (Applet1 and Applet2 are not triggered)	

6.3.3.1.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1
CRRN2	3
CRRN3	2

- 6.3.3.2 EVENT_MENU_SELECTION

Test Area Reference: FWK_APT_EMSE

6.3.3.2.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the EVENT_MENU_SELECTION when an Envelope Menu Selection is received with the item identifier of a menu entry of this applet if no proactive session is ongoing.

6.3.3.2.2 Test Suite Files

Test Script: FWK_APT_EMSE_1.scr

Test Applet: FWK_APT_EMSE_1.java

----FWK_APT_EMSE_2.java

Load Script: FWK_APT_EMSE_1.ldr

Cleanup Script: FWK_APT_EMSE_1.clr

Parameter File: FWK_APT_EMSE_1.par

6.3.3.2.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1d 1	Description Applet registration to EVENT_MENU_SELECTION and triggering ToolkitRegistry.initMenuEntry() method is called in the constructor of applet1 and Applet2. For applet1: MenuEntry="Applet1" Offset=0 Length=menuEntry.length HelpSupported=false IconQualifier=0 IconIdentifier=0 For applet2: MenuEntry="Applet2" Offset=0 Length=menuEntry.length HelpSupported=false IconQualifier=0 IconIdentifier=0 Length=menuEntry.length HelpSupported=false IconQualifier=0 IconIdentifier=0 event= EVENT_MENU_SELECTION 1-ToolkitRegistry.isEventSet() is called	1- The method must return true.	APDU Expectation
	in constructor. Perform SIM initialization the facility SET UP MENU and without the facilities SET EVENT LIST and POLL INTEVAL features 2-Item Identifier = 1 Event Menu Selection envelope is sent to the SIM with the item identifier of a menu entry of applet	2- Applet1 is triggered and applet2 is not triggered Applet1 finalizes	
	3-Item Identifier = 2 Event Menu Selection envelope is sent to the SIM with the item identifier of a menu entry of applet	3- Applet2 is triggered and applet1 is not triggered	

6.3.3.2.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1

- 6.3.3.3 EVENT_MENU_SELECTION_HELP_REQUEST

Test Area Reference: FWK_APT_EMSH

6.3.3.3.1 Conformance Requirement

Normal Execution

CRRN1: If and ENVELOPE (MENU_SELECTION_HELP_SUPPORTED) command is received for one entry supporting help, then STF shall trigger the corresponding applet.

6.3.3.3.2 Test Suite Files

Test Script: FWK_APT_EMSH_1.scr

Test Applet: FWK_APT_EMSH_1.java

FWK_APT_EMSH_2.java

Load Script: FWK_APT_EMSH_1.ldr

Cleanup Script: FWK_APT_EMSH_1.clr

Parameter File: FWK_APT_EMSH_1.par

6.3.3.3.3 Test Procedure

Description Applet registration to	API/Framework Expectation	APDU Expectation
EVENT_MENU_SELECTION_HELP_REQUEST		
and triggering		
called in the constructor of applet1 and		
1 .1.		
~		
IconIdentifier=0		
For Applet2:		
HelnSupported=true		
Teomacheritier=0		
event= EVENT MENU SELECTION HELP REQUEST		
	1-The command must return true.	
SET UP MENU and without the facilities SET		
Menu Selection Help Request envelope is sent to the SIM with the item identifier	2- Applet1 is triggered and applet2 is not triggered	
Menu Selection Help Request envelope is sent to the SIM with the item identifier	Applet1 finalizes 3- Applet2 is triggered and applet1 is not triggered	
	and triggering ToolkitRegistry.InitMenuEntry() method is called in the constructor of applet1 and Applet2. For Applet1: MenuEntry="Applet1" Offset=0 Length=menuEntry.length HelpSupported=true IconQualifier=0 IconIdentifier=0 For Applet2: MenuEntry="Applet2" Offset=0 Length=menuEntry.length HelpSupported=true IconQualifier=0 IconIdentifier=0 Length=menuEntry.length HelpSupported=true IconQualifier=0 IconIdentifier=0 event= EVENT_MENU_SELECTION_HELP_REQUEST l-ToolkitRegistry.isEventSet() is called in constructor. Perform SIM initialization the facility	and triggering ToolkitRegistry.InitMenuEntry() method is called in the constructor of applet1 and Applet2. For Applet1: MenuEntry="Applet1" Offset=0 Length=menuEntry.length HelpSupported=true IconQualifier=0 For Applet2: MenuEntry="Applet2" Offset=0 Length=menuEntry.length HelpSupported=true IconQualifier=0 Length=menuEntry.length HelpSupported=true IconQualifier=0 IconIdentifier=0 event= EVENT_MENU_SELECTION_HELP_REQUEST 1-ToolkitRegistry.isEventSet() is called in constructor. Perform SIM initialization the facility SET UP MENU and without the facilities SET EVENT LIST and POLL INTEVAL features 2-Item identifier =1 Menu Selection Help Request envelope is sent to the SIM with the item identifier of a menu entry of applet Applet1 is triggered and applet2 is not triggered 3-Applet2 is triggered and applet1 is not triggered

6.3.3.3.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1

- 6.3.3.4 EVENT_FORMATTED_SMS_PP_ENV

Test Area Reference: FWK_APT_EFSE

6.3.3.4.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the EVENT_FORMATTED_SMS_PP_ENV once once:

- it has been registered to this event,
- an envelope APDU carrying an SMS TPDU formatted according to [8], is received,
- event and Formatted Envelope DataDownLoadthe toolkit applet to be triggered is registered with the corresponding TAR, defined at the applet loading, is received and no proactive session is ongoing TAR in the SMS TPDU,
- the security is verified

CRRN2: The applet is not triggered by the EVENT_FORMATTED_SMS_PP_ENV once it has deregistered from this event.

6.3.3.4.2 Test Suite Files

Test Script: FWK_APT_EFSE_1.scr
Test Applet: FWK_APT_EFSE_1.java
Load Script: FWK_APT_EFSE_1.ldr
Cleanup Script: FWK_APT_EFSE_1.clr
Parameter File: FWK_APT_EFSE_1.par

6.3.3.4.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet registration to EVENT FORMATTED_SMS_PP_ENV and triggering Applet is registered to EVENT_FORMATTED_SMS_PP_ENV and EVENT_UNRECOGNIZED_ENVELOPE		
	1-An Envelope EVENT_FORMATTED_SMS_PP_ENV is sent to the SIM.	1-Applet is triggered	
2	Applet deregistration ToolkitRegistry.clearEvent() method is called for EVENT_FORMATTED_SMS_PP_ENV 2-A formatted sms pp envelope is sent to the SIM. An unrecognized envelope is sent to the	<u>1</u> 2 - Applet is not triggered	
	sim ToolkitRegistry.setEvent() method is called for EVENT_FORMATTED_SMS_PP_ENV 3-An Envelope FORMATTED_SMS_PP_ENV is sent to the SIM	23- Applet is triggered	

6.3.3.4.4 Test Coverage

CRR Number	Test Case Number
CRRN1 (See note 1)	1
CRRN2	2

Note 1: The security checks are not relevant to the test designed in this test area; they will be checked in the Framework Security Management section.

- 6.3.3.5 EVENT_UNFORMATTED_SMS_PP_ENV

Test Area Reference: FWK_APT_EUSE

6.3.3.5.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the EVENT_-UNFORMATTED_SMS_PP_ENV once it has registered to this event and an Unformatted Envelope DataDownLoad is received if no proactive session is ongoing

CRRN2: The applet is not triggered by the EVENT_-UNFORMATTED_SMS_PP_ENV once it has deregistered from this event.

6.3.3.5.2 Test Suite Files

Test Script: FWK_APT_EUSE_1.scr

Test Applet: FWK_APT_EUSE_1.java

Load Script: FWK_APT_EUSE_1.ldr

Cleanup Script: FWK_APT_EUSE_1.clr

Parameter File: FWK_APT_EUSE_1.par

6.3.3.5.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet registration to EVENT_UNFORMATTED_SMS_PP_ENV and triggering		
	Applet is registered to the EVENT_UNFORMATTED_SMS_PP_ENV and ENVENT_FORMATTED_SMS_PP_ENV. 1-Toolkit Registry.isEventSet() method is called for EVENT_UNFORMATTED_SMS_PP_ENV	1- The method returns true	
	2-An Envelope UNFORMATTED_SMS_PP_ENV is sent to the SIM.	2- Applet is triggered	
2	Applet deregistration		
	Toolkit Registry.clearEvent()method is called for EVENT_UNFORMATTED_SMS_PP_ENV 1-An unformatted sms pp envelope is sent to the SIM.	1- Applet isn't triggered	
	A formatted sms pp envelope is sent to the sim		
	Toolkit Registry.setEvent() method is called for EVENT_UNFORMATTED_SMS_PP_ENV		
	2-An Envelope UNFORMATTED_SMS_PP_ENV is sent to the SIM	2- Applet is triggered	

6.3.3.5.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1 <u>,2</u>
CRRN2	2

- 6.3.3.6 EVENT_CALL_CONTROL_BY_SIM

Test Area Reference: FWK_APT_ECCN

6.3.3.6.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the EVENT_CALL_CONTROL_BY_SIM once it has registered to this event and an Envelope Call Control is received

CRRN2: The applet is not triggered by the EVENT_CALL_CONTROL_BY_SIM once it has deregistered from this event.

6.3.3.6.2 Test Suite Files

Test Script: FWK_APT_ECCN_1.scr

Test Applet: FWK_APT_ECCN_1.java

Load Script: FWK_APT_ECCN_1.ldr

Cleanup Script: FWK_APT_ECCN_1.clr

Parameter File: FWK_APT_ECCN_1.par

6.3.3.6.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applets registration to EVENT_CALL_CONTROL_BY_SIM and triggering		·
	Applet1 is registered to EVENT_CALL_CONTROL_BY_SIM.		
	Applet2 is registered to EVENT_FORMATTED_SMS_PP_ENV		
	1-An Envelope Call control by SIM is sent to SIM	1- Applet1 is triggered	
	Applet1 execution is finished		
2	Applet deregistration and registration of the third applet to EVENT_CALL-CONTROL_BY_SIM.		
	1-An Envelope Formatted SMS PP envelope is sent to SIM	1-Applet2 is triggered by EVENT_FORMATTED_SMS_PP_ENV.	
	Applet2 contructs a DISPLAY TEXT proactive command.		
	2-ProactiveHandler.send() method is called		2- A proactive command DISPLAY TEXT is sent and applet is suspended until the terminal response
	3-An Envelope Call control by SIM envelope is sent to SIM	3- Applet1 is triggered	
	ToolkitRegistry.clearEvent() is called for EVENT_CALL_CONTROL_BY_SIM. Applet1 finalizes.		
	Applect Imatizes.	Applet1 finalizes.	TERMINAL RESPONSE of DISPLAY TEXT is sent to the SIM
	ToolkitRegistry.setEvent() method is called for EVENT_CALL_CONTROL_BY_SIM.		
	Applet2 is finished	Applet2 finalizes	
3	Applet triggering	reprote minimoo	
	An Envelope Call control by SIM envelope is sent ot SIM	Applet2 is triggered. (Applet1 is not triggered)	

6.3.3.6.4

Test Coverage

CRR Number	Test Case Number
CRRN1	1,2 <u>,3</u>
CRRN2	3

- 6.3.3.7 EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM

Test Area Reference: FWK_APT_EMCN

6.3.3.7.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM once it has registered to this event and an Envelope MO Short Message Control.

CRRN2: The applet is not triggered by the

EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM once it has deregistered from this event.

6.3.3.7.2 Test Suite Files

Test Script: FWK_APT_EMCN_1.scr

Test Applet: FWK_APT_EMCN_1.java

FWK_APT_EMCN_2.java

Load Script: FWK_APT_EMCN_1.ldr

Cleanup Script: FWK_APT_EMCN_1.clr

Parameter File: FWK_APT_EMCN_1.par

6.3.3.7.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet registration to EVENT_MO_SHORT_MESSAGE_CONTROL_B Y_SIM and triggering		•
	Applet1 is reggistered to EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM.		
	Applet2 is registered to EVENT_FORMATTED_SMS_PP_ENV.		
	1-An Envelope MO short message envelope is sent to SIM	1- Applet1 is triggered.	
	Applet1 execution is finished		
2	Applet deregistration and registration of the third applet to EVENT_MO_SHORT_MESSAGE_CONTROL_B Y_SIM. The STF shall not reply busy to a call control envelope		
	1-An Envelope formatted SMS PP envelope is sent to SIM.	1- Applet2 is triggered.	
	Applet2 builds a DISPLAY TEXT proactive command.		
	2-ProactiveHandler.send() method is called.		2- A Proactive command DISPLAY TEXT is sent and applet is suspended until the terminal response
	3-An Envelope MO Short message envelope is sent to SIM	3- Applet1 is triggered.	
	ToolkitRegistry.clearEvent() for EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM. Applet1 finalizes.		TERMINAL RESPONSE of
		Applet1 finalizes.	DISPLAY TEXT is sent to the SIM
	ToolkitRegistry.setEvent() method is called for EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM.		
	Applet2 execution finished.	Applied Continue	
3	Applet3 triggering	Applet2 finalizes.	
	An Envelope MO SMS control by SIM envelope is sent ot SIM	Applet2 is triggered. (Applet1 is not triggered)	

6.3.3.7.4

Test Coverage

CRR Number	Test Case Number	
CRRN1	1,2 <u>,3</u>	
CRRN2	3	

- 6.3.3.8 EVENT_TIMER_EXPIRATION

Test Area Reference: FWK_APT_ETEX

6.3.3.8.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the EVENT_TIMER_EXPIRATION once it has been registered to this event and an Envelope Timer Expiration with a Timer Identifier of the applet is received if no proactive session is ongoing.

CRRN2: The applet is not triggered by the EVENT_TIMER_EXPIRATION once it has been deregistered from this event.

6.3.3.8.2 Test Suite Files

Test Script: FWK_APT_ETEX_1.scr

Test Applet: FWK_APT_ETEX_1.java

Load Script: FWK_APT_ETEX_1.ldr

Cleanup Script: FWK_APT_ETEX_1.clr

Parameter File: FWK_APT_ETEX_1.par

6.3.3.8.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet registration to EVENT_TIMER_EXPIRATION and triggering Applet is registered to the EVENT_TIMER_EXPIRATION using the allocateTimer() method and to EVENT_FORMATTED_SMS_PP_ENV.		
	event= EVENT_TIMER_EXPIRATION 1-Toolkit Registry.isEventSet() method is called.	1- The method returns true	
	2-An Envelope TIMER_EXPIRATION is sent to the SIM.	2- Applet is triggered.	
2	Applet deregistration Timer id=1 Toolkit Registry.ReleaseTimer() method is called 1-An Envelope timer expiration is sent to the SIM. An Envelope formated sms pp envelope is sent to the sim Toolkit Registry.AllocateTimer() method	1- Applet isn't triggered	
	An Envelope formated sms pp envelope is sent to the sim		

ld	Description	API/Framework Expectation	APDU Expectation
	2-An Envelope TIMER_EXPIRATION is sent to the SIM.	2- Applet is triggered	

6.3.3.8.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1 <u>,2</u>
CRRN2	2

- 6.3.3.9 EVENT_UNFORMATTED_SMS_CB

Test Area Reference: FWK_APT_EUCB

6.3.3.9.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the EVENT_UNFORMATTED_SMS_CB once it has registered to this event and an Envelope Cell Broadcast DownLoad is received.

CRRN2: The applet is not triggered by the EVENT_UNFORMATTED_SMS_CB once it has deregistered from this event.

6.3.3.9.2 Test Suite Files

Test Script: FWK_APT_EUCB_1.scr

Test Applet: FWK_APT_EUCB_1.java

Load Script: FWK_APT_EUCB_1.ldr

Cleanup Script: FWK_APT_EUCB_1.clr

Parameter File: FWK_APT_EUCB_1.par

6.3.3.9.3 Test Procedure

ld	Description	API Expectation	APDU Expectation
1	Applet registration to EVENT_UNFORMATTED_SMS_CB and triggering		
	Applet is registered to the EVENT_UNFORMATTED_SMS_CB and EVENT_FORMATTED_SMS_PP_ENV.		
	event= EVENT_UNFORMATTED_SMS_CB 1-Toolkit Registry.isEventSet() method is called.	1- Method returns true.	
	2-An Envelope UNFORMATTED_SMS_CB is sent to the SIM.	2- Applet is triggered	
2	Applet deregistration		
	Toolkit Registry.ClearEvent()method is called for EVENT_UNFORMATTED_SMS_CB		
	1-An Envelope UNFORMATTED_SMS_CB is sent to the SIM.	1- Applet isn't triggered	

ld	Description	API Expectation	APDU Expectation
	An Envelope formatted sms pp envelope is sent to the sim		
	event= EVENT_UNFORMATTED_SMS_CB		
	Toolkit Registry.setEvent() method is called for EVENT_UNFORMATTED_SMS_CB		
	2-An Envelope UNFORMATTED_SMS_CB is sent to the SIM.	2- Applet is triggered	

6.3.3.9.4 Test Coverage

CRR Number	Test Case Number	
CRRN1	1 <u>,2</u>	
CRRN2	2	

- 6.3.3.10 EVENT_EVENT_DOWNLOAD_MT_CALL

Test Area Reference: FWK_APT_EDMC

6.3.3.10.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the EVENT_EVENT_DOWNLOAD_MT_CALL once it has registered to this event and an Envelope Event DownLoad MT Call is received.

CRRN2: The applet is not triggered by the EVENT_EVENT_DOWNLOAD_MT_CALL once it has deregistered from this event.

6.3.3.10.2 Test Suite Files

Test Script: FWK_APT_EMSE_1.scr

Test Applet: FWK_APT_EMSE_1.java

Load Script: FWK_APT_EMSE_1.ldr

Cleanup Script: FWK_APT_EMSE_1.clr

Parameter File: FWK_APT_EMSE_1.par

6.3.3.10.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet registration to EVENT_EVENT_DOWNLOAD_MT_CALL and triggering Applet is registered to the EVENT_EVENT_DOWNLOAD_MT_CALL and to EVENT_FORMATTED_SMS_PP_ENV.		
	event= EVENT_EVENT_DOWNLOAD_MT_CALL 1-Toolkit Registry.isEventSet() method is called. 2-An Envelope EVENT_DOWNLOAD_MT_CALL is	1- The method returns true2- Applet is triggered	
	sent to the SIM.		
2	Applet deregistration event= EVENT_EVENT_DOWNLOAD_MT_CALL Toolkit Registry.clearEvent()method is called Perform SIM initialization with all the facilities supported 1-An Envelope EVENT_DOWNLOAD_MT_CALL is sent to the SIM. An Envelope formatted sms pp envelope is sent to the sim event= EVENT_EVENT_DOWNLOAD_MT_CALL Toolkit Registry.setEvent() method is called	1- Applet isn't triggered	
	Perform SIM initialization with all the facilities supported 2-An Envelope EVENT_DOWNLOAD_MT_CALL is sent to the SIM.	2- Applet is triggered	

6.3.3.10.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1 <u>,2</u>
CRRN2	2

- 6.3.3.11 EVENT_EVENT_DOWNLOAD_CALL_CONNECTED

Test Area Reference: FWK_APT_EDCC

6.3.3.11.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the EVENT_EVENT_DOWNLOAD_CALL_CONNECTED once it has registered to this event and an Envelope Event DownLoad Call Connected is received.

CRRN2: The applet is not triggered by the

EVENT_EVENT_DOWNLOAD_CALL_CONNECTED once it has deregistered from this event.

6.3.3.11.2 Test Suite Files

Test Script: FWK_APT_EDCC_1.scr

Test Applet: FWK_APT_EDCC_1.java

Load Script: FWK_APT_EDCC_1.ldr

Clean-up Script: FWK_APT_EDCC_1.clr

6.3.3.11.3 Test Procedure

1	Applet registration to EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED and triggering		
	Applet is registered to the EVENT_EVENT_DOWNLOAD_CALL_CONNECTED and to EVENT_FORMATTED_SMS_PP_ENV.		
	<pre>event= EVENT_EVENT_DOWNLOAD_CALL_CONNECTED 1-Toolkit Registry.isEventSet() method is called.</pre>	1- Method returns true	
	2-An Envelope EVENT_DOWNLOAD_CALL_CONNECTED is sent to the SIM.	2- Applet is triggered.	
2	Applet deregistration		
	event=EVENT_EVENT_DOWNLOAD_CALL_CONNECTED Toolkit Registry.clearEvent()method is called		
	Perform SIM initialization with all the facilities supported		
	1-A call connected event dowload is sent to the SIM.	1- Applet isn't triggered	
	An Envelope formatted sms pp envelope is sent to the sim		
	<pre>Event= EVENT_EVENT_DOWNLOAD_CALL_CONNECTED Toolkit Registry.setEvent() method is called</pre>		
	Perform SIM initialization with all the facilities supported		
	2-An Envelope EVENT_DOWNLOAD_CALL_CONNECTED is sent to the SIM.	2- Applet is triggered	

6.3.3.11.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1 <u>,2</u>
CRRN2	2

- 6.3.3.12 EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED

Test Area Reference: FWK_APT_EDCD

6.3.3.12.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the

EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED once it has registered to this event and an Envelope Event DownLoad Call Disconnected is received.

CRRN2: The applet is not triggered by the

EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED once it has deregistered from this event.

6.3.3.12.2 Test Suite Files

Test Script: FWK_APT_EDCD_1.scr

Test Applet: FWK_APT_EDCD_1.java

Load Script: FWK_APT_EDCD_1.ldr

Cleanup Script: FWK_APT_EDCD_1.clr

Parameter File: FWK_APT_EDCD_1.par

6.3.3.12.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet registration to EVENT_EVENT_DOWNLOAD_CALL_DISCONN ECTED and triggering Applet is registered to the EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED and to EVENT_FORMATTED_SMS_PP_ENV.		
	called.	1- Method returns true	
	2-An Envelope EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED is sent to the SIM.	2- Applet is triggered.	
2	Applet deregistration		
	Event= EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED Toolkit Registry.clearEvent()method is called Perform SIM initialization with all the facilities supported		
	1-An Envelope EVENT_DOWNLOAD_CALL_DISCONNECTED is sent to the SIM.	1- Applet isn't triggered	
	a formatted sms pp envelope is sent to the sim.		
	Event= EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED Toolkit Registry.setEvent() method is called		

ld	Description	API/Framework Expectation	APDU Expectation
	Perform SIM initialization with all the facilities supported		
	2-An Envelope EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED is sent to the SIM.	2- Applet is triggered	

6.3.3.12.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1 <u>,2</u>
CRRN2	2

6.3.3.13 EVENT_EVENT_DOWNLOAD_LOCATION_STATUS

Test Area Reference: FWK_APT_EDLS

6.3.3.13.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the EVENT_EVENT_DOWNLOAD_LOCATION_STATUS once it has registered to this event and an Envelope Event DownLoad Location Status is received.

CRRN2: The applet is not triggered by the

EVENT_EVENT_DOWNLOAD_LOCATION_STATUS once it has deregistered from this event.

6.3.3.13.2 Test Suite Files

Test Script: FWK_APT_EDLS_1.scr

Test Applet: FWK_APT_EDLS_1.java

Load Script: FWK_APT_EDLS_1.ldr

Cleanup Script: FWK_APT_EDLS_1.clr

Parameter File: FWK_APT_EDLS_1.par

6.3.3.13.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet registration to EVENT_EVENT_DOWNLOAD_LOACTION_STA TUS and triggering		
	Applet is registered to the EVENT_EVENT_DOWNLOAD_LOCATION_STATUS and to EVENT_FORMATTED_SMS_PP_ENV.		
	Event=EVENT_EVENT_DOWNLOAD_LOCATION_STATUS 1-Toolkit Registry.isEventSet() method is called.	1- Method returns true	
	2-An Envelope EVENT_EVENT_DOWNLOAD_LOCATION_STATUS is sent to the SIM.	2- Applet is triggered.	
2	Applet deregistration		

ld	Description	API/Framework Expectation	APDU Expectation
	Event=EVENT_EVENT_DOWNLOAD_LOCATION_STATUS Toolkit Registry.clearEvent()method is called Perform SIM initialization with all the facilities supported		
	1-An Envelope EVENT_DOWNLOAD_LOCATION_STATUS is sent to the SIM.	1- Applet isn't triggered	
	a formatted sms pp envelope is sent to the $\mathop{\text{sim}}$		
	Event= EVENT_EVENT_DOWNLOAD_LOCATION_STATUS Toolkit Registry.setEvent() method is called Perform SIM initialization with all the facilities supported		
	2-An Envelope EVENT_DOWNLOAD_LOCATION_STATUS is sent to the SIM.	2- Applet is triggered	

6.3.3.13.4

Test Coverage

CRR Number	Test Case Number
CRRN1	1 <u>,2</u>
CRRN2	2

- 6.3.3.14 EVENT_EVENT_DOWNLOAD_USER_ACTIVITY

Test Area Reference: FWK_APT_EDUA

6.3.3.14.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the EVENT_EVENT_DOWNLOAD_USER_ACTIVITY once it has registered to this event and an Envelope Event DownLoad User Activity is received.

CRRN2: The applet is not triggered by the EVENT_EVENT_DOWNLOAD_USER_ACTIVITY once it has deregistered from this event.

6.3.3.14.2 Test Suite Files

Test Script: FWK_APT_EDUA_1.scr

Test Applet: FWK_APT_EDUA_1.java

Load Script: FWK_APT_EDUA_1.ldr

Cleanup Script: FWK_APT_EDUA_1.clr

Parameter File: FWK_APT_EDUA_1.par

6.3.3.14.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet registration to EVENT_EVENT_DOWNLOAD_USER_ACTIVITY and triggering Applet is registered to the		
	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY and to EVENT_FORMATTED_SMS_PP_ENV. Event= EVENT_EVENT_DOWNLOAD_USER_ACTIVITY		
	1-Toolkit Registry.isEventSet() method is called.	1- Method returns true	
	2-An Envelope EVENT_DOWNLOAD_USER_ACTIVITY is sent to the SIM.	2- Applet is triggered	
2	Applet deregistration		
	Event= EVENT_EVENT_DOWNLOAD_USER_ACTIVITY Toolkit Registry.clearEvent()method is called Perform SIM initialization with all the facilities supported		
	1-An Envelope EVENT_DOWNLOAD_USER_ACTIVITY is sent to the SIM.	1- Applet isn't triggered	
	a formatted sms pp envelope is sent to the sim		
	Event= EVENT_EVENT_DOWNLOAD_USER_ACTIVITY Toolkit Registry.setEvent() method is called Perform SIM initialization with all the facilities supported		
	2-An Envelope EVENT_DOWNLOAD_USER_ACTIVITY is sent to the SIM.	2- Applet is triggered	

6.3.3.14.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1 <u>,2</u>
CRRN2	2

- 6.3.3.15 EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE

Test Area Reference: FWK_APT_EDIS

6.3.3.15.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the

EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE once it has registered to this event and an Envelope Event DownLoad Idle Screen Available is received.

CRRN2: The applet is not triggered by the

EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE once it has deregistered from this event.

6.3.3.15.2 Test Suite Files

Test Script: FWK_APT_EDIS_1.scr

Test Applet: FWK_APT_EDIS_1.java

Load Script: FWK_APT_EDIS_1.ldr

Cleanup Script: FWK_APT_EDIS_1.clr

Parameter File: FWK_APT_EDIS_1.par

6.3.3.15.3 Test Procedure

14	Description	ADI/Eromowork Evacototics	ADDII Eynoototion
<u>ld</u> 1	Description Applet registration to	API/Framework Expectation	APDU Expectation
	EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_		
	AVAILABLE and triggering		
	Applet is registered to the		
	EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE and to EVENT_FORMATTED_SMS_PP_ENV		
	Event=		
	EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE 1-Toolkit Registry.isEventSet() method is	1- Method retuns true	
	called.	Mounda rotaino aldo	
	2-An Envelope		
	EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE is	2- Applet is triggered	
	sent to the SIM.	7 Applet to triggered	
2	Applet deregistration		
	Event=EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVA		
	ILABLE		
	Toolkit Registry.clearEvent()method is		
	called Perform SIM initialization with all the		
	facilities supported		
	1-An Envelope	1- Applet isn't triggered	
	EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE is sent to the SIM.	, Appletion talggered	
	sent to the SIM.		
	a formatted sms pp envelope is sent to the		
	sim		
	Event=		
	EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE		
	Toolkit Registry.setEvent() method is		
	called		
	Perform SIM initialization with all the facilities supported		
	2-22-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2		
	2-An Envelope	2- Applet is triggered	
	EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE is		
	sent to the SIM.		
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6.3.3.15.4

Test Coverage

CRR Number	Test Case Number
CRRN1	1 <u>,2</u>
CRRN2	2

- 6.3.3.16 EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS

Test Area Reference: FWK_APT_EDCR

6.3.3.16.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the

EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS once it has registered to this event and Envelope Event DownLoad Card Reader Status is received.

CRRN2: The applet is not triggered by the

EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS once it has deregistered from this event.

6.3.3.16.2 Test Suite Files

Test Script: FWK_APT_EDCR_1.scr

Test Applet: FWK_APT_EDCR_1.java

Load Script: FWK_APT_EDCR_1.ldr

Cleanup Script: FWK_APT_EDCR_1.clr

Parameter File: FWK_APT_EDCR_1.par

6.3.3.16.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet registration to EVENT_EVENT_DOWNLOAD_CARD_READERSTATUS and triggering		
	Applet is registered to the EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS and to EVENT_FORMATTED_SMS_PP_ENV		
	Event=EVENT_EVENT_DOWNLOAD_CARD_READER_STA TUS 1-Toolkit Registry.isEventSet() method is called.	1- Method returns true	
	2-An Envelope EVENT_DOWNLOAD_CARD_READER_STATUS is sent to the SIM.	2- Applet is triggered	
2	Applet deregistration		
	Event= EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS		
	Toolkit Registry.clearEvent()method is called		
	Perform SIM initialization with all the facilities supported		
	1-An Envelope EVENT_DOWNLOAD_CARD_READER_STATUS is sent	1- Applet isn't triggered	

ld	Description	API/Framework Expectation	APDU Expectation
	to the SIM.		
	An Envelope formatted sms pp envelope is sent to the sim		
	Event= EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS		
	Toolkit Registry.setEvent() method is called		
	Perform SIM initialization with all the facilities supported		
	2-An Envelope EVENT_DOWNLOAD_CARD_READER_STATUS is sent to the SIM.	2- Applet is triggered	
	to the SIM.		

6.3.3.16.4

Test Coverage

CRR Number	Test Case Number
CRRN1	1 <u>,2</u>
CRRN2	2

- 6.3.3.17 EVENT_UNRECOGNIZED_ENVELOPE

Test Area Reference: FWK_APT_EUEV

6.3.3.17.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the EVENT_UNRECOGNIZED_ENVELOPE once it has registered to this event and an Unrecognized Envelope is received.

CRRN2: The applet is not triggered by the EVENT_UNRECOGNIZED_ENVELOPE once it has deregistered from this event.

6.3.3.17.2 Test Suite Files

Test Script: FWK_APT_EUEN_1.scr

Test Applet: FWK_APT_EUEN_1.java

Load Script: FWK_APT_EUEN_1.ldr

Cleanup Script: FWK_APT_EUEN_1.clr

Parameter File: FWK_APT_EUEN_1.par

6.3.3.17.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet registration to EVENT_UNRECOGNIZED_ENVELOPE and triggering		
	Applet is registered to the EVENT_UNRECOGNIZED_ENVELOPE and to EVENT_FORMMATTED_SMS_PP_ENV Event= EVENT_UNRECOGNIZED_ENVELOPE 1-Toolkit Registry.isEventSet() method is called. 2-An Envelope UNRECOGNIZED_ENVELOPE is sent to the SIM.	1- Method returns true2- Applet is triggered	
	Applet deregistration		
2	Applet deregistration Event= EVENT_UNRECOGNIZED_ENVELOPE Toolkit Registry.clearEvent()method is called		
	1-An Envelope UNRECOGNIZED_ENVELOPE is sent to the SIM.	1- Applet isn't triggered	
	a formatted sms pp envelope is sent to the sim		
	Event= EVENT_UNRECOGNIZED_ENVELOPE Toolkit Registry.setEvent() method is called		
	2-An Envelope UNRECOGNIZED_ENVELOPE is sent to the SIM.	2- Applet is triggered	

6.3.3.17.4

Test Coverage

CRR Number	Test Case Number
CRRN1	1 <u>,2</u>
CRRN2	2

- 6.3.3.18 EVENT_STATUS_COMMAND

Test Area Reference: FWK_APT_ESTC

6.3.3.18.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the EVENT_STATUS_COMMAND once it has registered to this event and a Status Command is received.

CRRN2: The applet is not triggered by the EVENT_STATUS_COMMAND once it has deregistered from this event.

Suite Files
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Test Script: FWK_APT_ESTC_1.scr

Test Applet: FWK_APT_ESTC_1.java

FWK_APT_ESTC_2.java

FWK_APT_ESTC_3.java

Load Script: FWK_APT_ESTC_1.ldr

Cleanup Script: FWK_APT_ESTC_1.clr

Parameter File: FWK_APT_ESTC_1.par

6.3.3.18.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applets registration to EVENT_STATUS_COMMAND and triggering		
	Applet1 is registered to EVENT_STATUS_COMMAND using the		
	requestPollInterval() command.		
	Applet2 is registered to		
	EVENT_STATUS_COMMAND using the RequestPollInterval() command.		
	Applet3 is registered to EVENT_FORMATTED_SMS_PP_ENV.		
	1-A status command is sent to SIM		
	Applet1 execution is finished	1- Applet1 is triggered.	
	THE TOTAL CHOCKS TO THE TOTAL CHOCKS	Applet1 finalizes	
	Applet2 execution is finished	2- Applet2 is triggered.	
		Applet2 finalizes	
	Applet deregistration and registration of the	3- Applet 3 is not triggered	
	third applet to EVENT_STATUS_COMMAND. The STF shall not reply busy to a call control envelope		
	1-A formatted sms pp envelope is sent to SIM	1- Applet3 is triggered.	
	Applet3 builds a DISPLAY TEXT.		2 A propositive command
	2- ProactiveHandler.send() is called		2- A proactive command DISPLAY TEXT is sent and applet is suspended until the terminal response
	3-A status command is sent to SIM.	3- Applet1 is triggered.	
	requestPollInteval with POLL_NO_DURATION is called		
	Applet1 finalized		
	requestPollInteval with POLL_NO_DURATION is called Applet2 finalized	Applet1 finalizes 4- Applet2 is triggered.	
	requestPollInterval() method is called.	Applet2 finalizes	
		Applet3 finalizes	5- TERMINAL RESPONSE of DISPLAY TEXT is sent to the SIM
	Applet3 execution finished.		

ld	Description	API/Framework Expectation	APDU Expectation
3	Applet3 triggering		
	Perform SIM initialization with all the facilities supported		
	Status command is sent to SIM.	Applet3 is triggered. (Applet1 and Applet2 are not triggered)	

6.3.3.18.4

Test Coverage

CR Number	Test Case Number
CRRN1	1,2 <u>,3</u>
CRRN2	3

- 6.3.3.19 EVENT_FORMATTED_SMS_CB

Test Area Reference: FWK_APT_EFCB

6.3.3.19.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the EVENT FORMATTED SMS CB once:

- it has been registered to this event,
- an envelope APDU carrying a Cell Broadcast Page, formatted according to [8], is received,
- the toolkit applet to be triggered is registered with the corresponding TAR in the CB page,
- the security is verified

<u>CRRN2</u>: The applet is not triggered by the EVENT FORMATTED SMS CB once it has deregistered from this event.

6.3.3.19.2 Test Suite Files

Test Script:	FWK APT EFCB 1.scr
Test Applet:	FWK APT EFCB 1.java
Load Script:	FWK APT EFCB 1.ldr
Cleanup Script:	FWK_APT_EFCB_1.clr
Parameter File:	FWK APT EFCB 1.par

6.3.3.19.3 Test Procedure

ld	<u>Description</u>	API/Framework Expectation	APDU Expectation
1	Applet registration to EVENT FORMATTED SMS CB and triggering Applet is registered to EVENT_FORMATTED_SMS_CB and EVENT_FORMATTED_SMS_PP_ENV		
<u>2</u>	1-An Envelope EVENT_FORMATTED_SMS_CB is sent to the SIM. Applet deregistration	1-Applet is triggered	
	ToolkitRegistry.clearEvent() method is called for EVENT_FORMATTED_SMS_CB 1-A formatted SMS CB envelope is sent to		
	the SIM. 2-An envelope SMS-PP formatted is sent to	1- Applet is not triggered	
	the SIM ToolkitRegistry.setEvent() method is called for EVENT_FORMATTED_SMS_CB	2- Applet is triggered	
	3-An Envelope FORMATTED_SMS_CB is sent to the SIM	3- Applet is triggered	

6.3.3.19.4 Test Coverage

CR Number	Test Case Number	
CRRN1 (See note 1)	<u>1,2</u>	
CRRN2	<u>2</u>	

Note 1: The security checks are not relevant to the test designed in this test area; they will be checked in the "Framework Security Management" section.

- 6.3.3.20 EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION

Test Area Reference: FWK_APT_EDLG

6.3.3.20.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the

EVENT EVENT DOWNLOAD LANGUAGE SELECTION once it has registered to this event and an Envelope Event DownLoad Language Selection is received.

CRRN2: The applet is not triggered by the

EVENT EVENT DOWNLOAD LANGUAGE SELECTION once it has deregistered from this event.

6.3.3.20.2 Test Suite Files

Test Script: FWK APT EDLG 1.scr

Test Applet: FWK APT EDLG 1.java

Load Script: FWK APT EDLG 1.ldr

Cleanup Script: FWK_APT_EDLG_1.clr

Parameter File: FWK APT EDLG 1.par

6.3.3.20.3 Test Procedure

<u>ld</u>	<u>Description</u>	API/Framework Expectation	APDU Expectation
1	Applet registration to EVENT EVENT DOWNLOAD LANGUAGE SE LECTION and triggering		
	Applet is registered to the EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION and to EVENT_FORMATTED_SMS_PP_ENV.		
	Event= EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION		
	1-Toolkit Registry.isEventSet() method is called.	1-Method returns true	
	2-An Envelope EVENT_DOWNLOAD_LANGUAGE_SELECTION is sent to the SIM.	2- Applet is triggered	
2	Applet deregistration Event= EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION Toolkit Registry.clearEvent()method is called Perform SIM initialization with Profile		
	Download, SMS PP Data Download, Command Result and Language Selection facilities. 1-An Envelope EVENT_DOWNLOAD_LANGUAGE_SELECTION is sent to the SIM.	1- Applet isn't triggered	
	a formatted sms pp envelope is sent to the $\underline{\sin}$		
	<pre>Event= EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION Toolkit Registry.setEvent() method is called</pre>		
	Perform SIM initialization with Profile Download, SMS PP Data Download, Command Result and Language Selection facilities.		
	2-An Envelope EVENT_DOWNLOAD_LANGUAGE_SELECTION is sent to the SIM.	2- Applet is triggered	

6.3.3.20.4 Test Coverage

CR Number	Test Case Number	
CRRN1	<u>1, 2</u>	
CRRN2	<u>2</u>	

- 6.3.3.21 EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION

Test Area Reference: FWK_APT_EDBT

6.3.3.21.1 Conformance Requirement

Normal Execution

CRRN1: The applet is triggered by the

EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION once it has registered to this event and an Envelope Event DownLoad Browser Termination is received.

CRRN2: The applet is not triggered by the

EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION once it has deregistered from this event.

6.3.3.21.2 Test Suite Files

Test Script:	FWK_APT_EDBT_1.scr
Test Applet:	FWK APT EDBT 1.java
Load Script:	FWK APT EDBT 1.ldr
Cleanup Script:	FWK_APT_EDBT_1.clr
Parameter File:	FWK APT EDBT 1 par

6.3.3.21.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet registration to EVENT EVENT DOWNLOAD BROWSER TERMINATION and triggering		
	Applet is registered to the EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION and to EVENT_FORMATTED_SMS_PP_ENV		
	Event= EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION		
	1-Toolkit Registry.isEventSet() method is called.	1-Method returns true	
	2-An Envelope EVENT_DOWNLOAD_BROWSER_TERMINATION is sent to the SIM.	2- Applet is triggered	
2	Applet deregistration		
	Event= EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION Toolkit Registry.clearEvent()method is called Perform SIM initialization with Profile Download, SMS PP Data Download, Command Result and Browser Termination facilities. 1-An Envelope EVENT_DOWNLOAD_BROWSER_TERMINATION is sent to the SIM.	1- Applet isn't triggered	
	$\frac{\text{a formatted sms pp envelope is sent to the}}{\underline{\text{sim}}}$		
	Event= EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION Toolkit Registry.setEvent() method is called		
	Perform SIM initialization with Profile Download, SMS PP Data Download, Command Result and Browser Termination facilities.		
	2-An Envelope EVENT_DOWNLOAD_BROWSER_TERMINATION is sent to the SIM.	2- Applet is triggered	

6.3.3.21.4 Test Coverage

CR Number	Test Case Number	
CRRN1	<u>1, 2</u>	
CRRN2	<u>2</u>	

6.3.4 Proactive Command Sending by the STF

- 6.3.4.1 System Proactive Commands

Test Area Reference: FWK_PCS_SPCO

6.3.4.1.1 Conformance Requirements

Normal Execution

CRRN1: When a toolkit applet changes a menu entry of its registry object, the SIM Toolkit Framework shall dynamically* update the menu stored in the ME during the current card session

CRRN2: The STF shall use the data of the EFsume file when issuing the SET UP MENU proactive command.

CRRN3: For all EVENT_EVENT_DOWNLOAD_*: When a toolkit applet changes one or more of these requested events of its registry object, the STF shall dynamically* update the event list stored in the ME during the current card session by SET UP EVENT LIST proactive command.

*The STF shall send its system proactive command as soon as no proactive session is pending and all the applets registered to the current events have been triggered and have returned from the processToolkit method invocation.

6.3.4.1.2 Test Suite Files

Test Script: FWK_PCS_SPCO_1.scr

Test Applet: FWK_PCS_SPCO_1.java

Load Script: FWK_PCS_SPCO_1.ldr

Cleanup Script: FWK_PCS_SPCO_1.clr

Parameter File: FWK_PCS_SPCO_1.par

6.3.4.1.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Install Applet 1, Registered to the EVENT_EVENT_DOWNLOAD_MT_CALL and EVENT_EVENT_DOWNLOAD_ LOCATION_STATUS		setEventList proactive command [Event list]= '19020003' Or '99020003'
	Perform SIM initialization with EVENT DOWNLOAD facilities supported		
2	Trigger the applet by ENVELOPE		1. DISPLAY TEXT
	(SMS_FORMATTED_PP) command Clear the events and build a display text		Proactive command
	command		2. SET UP EVENT
			LIST Proactive
			command
			[CommandQualifier]= 00h

6.3.4.1.4 Test Coverage

CRR number	Test case number
N1	see:
	chapter 6.2.9.2, CRRN1,
	chapter 6.2.9.4, CRRN3,
	chapter 6.2.9.5 CRRN4,
	chapter 6.2.9.8 CRRN1
N2	see:
	chapter 6.2.9.2 CRRN1,
	chapter 6.2.9.8 CRRN1
N3	1,2

- 6.3.4.2 Interaction with GSM commands

Test Area Reference: FWK_PCS_IGCO

6.3.4.2.1 Conformance Requirements

Normal Execution

CRRN1: The STF shall process a GSM command even when a proactive command is pending (before and after the FETCH command until the terminal response). The STF shall answer with the SW1 and SW2 described in [3] and [4].

6.3.4.2.2 Test Suite Files

Test Script: FWK_PCS_IGCO_1.scr

Test Applet: FWK_PCS_IGCO_1.java

Load Script: FWK_PCS_IGCO_1.ldr

Cleanup Script: FWK_PCS_IGCO_1.clr

Parameter File: FWK_PCS_IGCO_1.par

6.3.4.2.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Interaction with GSM Commands after TERMINAL PROFILE in connection with FETCH and TERMINAL RESPONSE	•	
	Applet is registered to Menu Selection		
	RST TERMINAL PROFILE (Profile: supports all facilities except: SET UP EVENT LIST, POLL INTERVAL and POLLING OFF) 1- System issues a proactive command SETUP_MENU		1- 91xx
	2- SELECT MF 3- GET RESPONSE (6 Bytes) 4- Failed SELECT File 5- FETCH		2- 9Fxx 3- 91xx 4- 9404 5- Proactive Command:
	6- SELECT MF 7- GET RESPONSE (6 Bytes) 8- TERMINAL RESPONSE		SETUP MENU
	0- TERMINAL RESPONSE		6- 9Fxx 7- 9000 8- 9000
2	Interaction with GSM Commands after ENVELOPE (MENU SELECTION) in connection with FETCH and TERMINAL RESPONSE		
	Menu Entry ID = 0x01		
	1- SELECT MF 2- GET RESPONSE (6 Bytes) 3- Failed SELECT File 4- FETCH 5- SELECT MF		1- 9FXX 2- 91XX 3- 9404 4- Proactive Command: DISPLAY TEXT
	6- GET RESPONSE (6 Bytes)		5- 9FXX

ld	Description	API/Framework Expectation	APDU Expectation
	7- TERMINAL RESPONSE		6- 9000
			7- 9000
3	Interaction with GSM Commands after TERMINAL RESPONSE in proactive command session in connection with FETCH and TERMINAL RESPONSE		
	Menu Entry ID = 0x02		
	1- SELECT MF 2- GET RESPONSE (6 Bytes) 3- FETCH		1- 9FXX 2- 91XX 3- Proactive Command: DISPLAY TEXT
	4- SELECT MF 5- GET RESPONSE (6 Bytes) 6- Failed SELECT File 7- TERMINAL RESPONSE		4- 9FXX 5- 9000 6- 9404 7- 9000
	8- SELECT MF 9- GET RESPONSE (6 Bytes) 10-Failed SELECT File 11-FETCH 12-SELECT MF 13-GET RESPONSE (6 Bytes)		8- 9FXX 9- 91XX 10-9404 11-Proactive Command: DISPLAY TEXT
	13-GET RESPONSE (6 BYCES) 14-TERMINAL RESPONSE		12-9FXX 13-9000 14-9000

6.3.4.2.4 Test Coverage

CRR number	Test case number
N1	1,2,3

6.3.5 Exception Handling

- 6.3.5.1 Hide Exceptions from the ME

Test Area Reference: FWK_EXH_HEME

6.3.5.1.1 Conformance Requirements

Normal Execution

CRRN1: A toolkit applet may throw an exception, but this error will not be sent to the ME.

* Because the behaviour of the SIM is not exactly defined for the above CRRN, there are no tests defined here yet.

6.3.5.2 Interaction with Multiple Triggering

Test Area Reference: FWK_EXH_IMTG

6.3.5.2.1 Conformance Requirements

Normal Execution:

CRRN1 : An exception thrown by a toolkit applet, will not influence toolkit applets registered to the same event

6.3.5.2.2 Test Suite Files

Test Script: FWK_EXH_IMTG-_1.scr

Test Applet: : FWK_EXH_IMTG-_1.java

Load Script: FWK_EXH_IMTG_1.ldr

Cleanup Script: FWK_EXH_IMTG_1.clr

Parameter File: FWK_EXH_IMTG_1.par

6.3.5.2.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
0	Load/install 2 toolkit applets registered to		
	EVENT_STATUS_COMMAND, EVENT_PROFILE_DOWNLOAD,		
	EVENT_UNRECOGNISED_ENVELOPE,		
	EVENT_EVENT_DOWNLOAD_MT_CALL,		
	EVENT_UNFORMATTED_SMS_PP_ENV,		
	EVENT_UNFORMATTED_SMS_PP_UPD, EVENT_UNFORMATTED_SMS_CB		
	EVENT_ON ONMATTED_OMO_OD		
	<pre>applet1: Priority= 0x01, applet2: Priority= 0x02,</pre>		
	(i.e. applet1 is triggered before applet2)		
1	Status_Command is sent		
	Applet 1 is triggered	1- Applet1 is triggered	
	747-002 00-555-00	:	
	Applet 2 is triggered	2- NullPointerException is thrown	
	inplied 2 ib dilggered	2. Applet2 is triggered Applet1.	
		3- Applet2 is triggered Applet1: NullPointerException is thrown	
2	Profile_Download is sent		
	Applet 1 is triggered	1- Applet1 is triggered	
	implee I ib diiggeled	:	
	Applet 2 is triggered	2- NullPointerException is thrown	
		3- Applet2 is triggered Applet1:	
		NullPointerException is thrown	
3	Unrecognised_Envelope is sent		
	Applet 1 is triggered	1- Applet1 is triggered	
		<u>:</u>	
	Applet 2 is triggered	2- NullPointerException is thrown	
		3- Applet2 is triggeredApplet1:	
		NullPointerException is thrown	
4	Event_Download_MT_Call is sent		
	Applet 1 is triggered	1- Applet1 is triggered	
		<u>:</u>	
	Applet 2 is triggered	2- NullPointerException is thrown	
		3- Applet2 is triggeredApplet1:	
		NullPointerException is thrown	
5	Unformatted_SMS_PP_Env is sent		
	Applet 1 is triggered	1- Applet1 is triggered	
		<u>.</u>	
	Applet 2 is triggered	2- NullPointerException is thrown	
			_

ld	Description	API/Framework Expectation	APDU Expectation
		3- Applet2 is triggered Applet1:	
		NullPointerException is thrown	
6	Unformatted_SMS_PP_Upd is sent		
	Applet 1 is triggered	1- Applet1 is triggered	
	Applet 2 is triggered	2- NullPointerException is thrown	
		3- Applet2 is triggered Applet1: NullPointerException is thrown	
7	Unformatted_SMS_CB is sent		
	Applet 1 is triggered	1- Applet1 is triggered	
	Applet 2 is triggered	2- NullPointerException is thrown	
		3- Applet2 is triggered Applet1: NullPointerException is thrown	

6.3.5.2.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1,2,3,4,5,6,7

6.3.6 Framework Security Management

Security Parameters

The table that follows contains the security parameters that shall be used when the 03.48 security is required in the test cases developed in the current section.

Parameter Value in hexadecim	
KIC	11
KID	11
CNTR	00 00 00 00 01
Key for ciphering	01 41 42 7F DA E8 91 A7
Key for RC/CC/DS	01 23 45 67 89 AB CD EF

If a parameter is not listed explicitly in the above table, the default values of section 4.7.3.1 apply.

6.3.6.1 Input Data

Test Area Reference: FWK_FWS_INDA

6.3.6.1.1 Conformance Requirements

Normal Execution

CRRN1: If the SIM receives an envelope APDU containing an SMS_PP_DATADOWNLOAD BER TLV formatted according to GSM03.48,[8], the SIM Toolkit Framework shall verify the GSM03.48 security of the SMS TPDU.

CRRN2: The toolkit applet will only be triggered if the TAR is known and the security verified.

CRRN3: If the SIM receives an envelope APDU containing an SMS_CB_DATADOWNLOAD formatted according to [8], the SIM Toolkit Framework shall verify the security of the cell broadcast page.

6.3.6.1.2 Test Area Files

Test Script: FWK_FWS_INDA_1.scr
Test Applet: FWK_FWS_INDA_1.java

FWK_FWS_INDA_2.javaFWK_FWS_INDA_2.java

FWK FWS INDA 3.java

FWK FWS INDA 4.java

Load Script: FWK_FWS_INDA_1.ldr

Cleanup Script: FWK_FWS_INDA_1.clr

Parameter File: FWK_FWS_INDA_1.par

6.3.6.1.3 Test Procedure

ld	Description	ADI/Eromowork Exportation	APDII Exportation
1	Framework checks the Cryptographic checksum and deciphers the data Applet1 is loaded and installed Applet1 is loaded and installed 1-Envelope(SMS-PP) 03.48 formatted is sent to the SIM with this features: Ciphering; Cryptographic checksum; No proof of receipt; Data = 01	API/Framework Expectation 1- The applet is triggered.	APDU Expectation
2	Framework checks the Cryptographic checksum and deciphers the data Applet2 is installed 1-Envelope(SMS-PP) 03.48 formatted is sent	1- Applet1 is triggered This	2- The SIM answers to the
	to the SIM with this features: Ciphering; Cryptographic checksum; No proof of receipt; TAR of Applet 1 Data = 02		Envelope with status words 9000
	<pre>2-Envelope(SMS-PP) 03.48 formatted is sent to the SIM with this features: No ciphering; No cryptographic checksum; No proof of receipt; TAR of Applet 2 Data = 03</pre>	3- Applet2 is triggered	4-The SIM answers to the Envelope with status words 9000
3	Envelope(SMS-PP)-03.48 formatted with wrong cryptographic checksum	No applet is triggered	1- The SIM answers to the Envelope with status words 9000
	Wrong Cryptographic checksum; No proof of receipt; TAR of Applet 1 Data = 04		

ld	Description	API/Framework Expectation	APDU Expectation
4	Framework checks the Cryptographic checksum and deciphers the data Applet3 is loaded and installed 1-Envelope(SMS-CB) formatted is sent to the SIM with this features: Ciphering; Cryptographic checksum; No proof of receipt; Data = 01	1- Applet3 is triggered.	1- The SIM answers to the Envelope with status words 9000
<u>5</u>	Triggering two different applets with different security on Envelope(SMS-CB) formatted Applet4 is installed 1-Envelope(SMS-CB) formatted is sent to the SIM with this features: Ciphering; Cryptographic checksum; No proof of receipt; TAR of Applet 3 Data = 02	1- Applet3 is triggered	2- The SIM answers to the Envelope with status words 9000
	2-Envelope(SMS-CB) formatted is sent to the SIM with this features: No ciphering; Cryptographic checksum; No proof of receipt; TAR of Applet 4 Data = 03	3- Applet4 is triggered	4- The SIM answers to the Envelope with status words 9000
<u>6</u>	Envelope(SMS-CB) formatted with wrong cryptographic checksum No ciphering; Wrong Cryptographic checksum; No proof of receipt; TAR of Applet 3 Data = 04	No applet is triggered	1- The SIM answers to the Envelope with status words 9000

6.3.6.1.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1,2,3
CRRN2	3 <u>,6</u>
CRRN3	<u>4,5,6</u>

- 6.3.6.2 Output Data

Test Area Reference: FWK_FWS_OUDA

6.3.6.2.1 Conformance Requirements

Normal Execution

CRRN1: The SIM Toolkit Framework shall secure and send the response packet.

6.3.6.2.2 Test Area Files

Test Script: FWK_FWS_OUDA_1.scr

Test Applet: FWK_FWS_OUDA_1.java

Load Script: FWK_FWS_OUDA_1.ldr

Cleanup Script: FWK_FWS_OUDA_1.clr

Parameter File: FWK_FWS_OUDA_1.par

6.3.6.2.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Envelope(SMS-PP) 03.48-formatted Ciphering; Cryptographic checksum; proof of receipt response shall be sent using SMS-Deliver-Report; no security applied to proof of receipt Data in plain text = "APPLET1"	The applet is triggered and sends a "Display Text" proactive command with the data received in the Envelope.	
2	Envelope(SMS-PP) 03.48 formatted Ciphering; Cryptographic checksum; proof of receipt response shall be sent using SMS-Deliver-Report; no security applied to proof of receipt Data in plain text = "APPLET1"	The applet posts application data. It does not call the ProactiveHandler.send() method	
3	Envelope(SMS-PP) 03.48-formatted Ciphering; Cryptographic checksum; proof of receipt response shall be sent using SMS-Deliver-Report; no security applied to proof of receipt Data in plain text = "TEST"	The applet posts application data and calls the ProactiveHandler.send() method to send a "Display Text" proactive command with the data received in the Envelope.	The SIM answers to the Envelope with status words 9Fxx and a PoR is retrieved with a GetResponse command. The PoR has the application data posted by the application. The SIM answers to the Ge Response command with status words 91xx to issue the Display Text "TEST".
4	Envelope(SMS-PP) 03.48-formatted Ciphering; Cryptographic checksum; proof of receipt response shall be sent using SMS-Deliver-Report; proof of receipt shall be ciphered Data in plain text = "TEST"	The applet posts application data and calls the ProactiveHandler.send() method to send a "Display Text" proactive command with the data received in the Envelope.	The SIM answers to the Envelope with status words 9Fxx and a PoR is retrieved with a GetResponse command. The PoR has the application data posted by the application. The SIM answers to the GetResponse command with status words 91xx to issue the Display Text "TEST".
5	Envelope(SMS-PP) 03.48-formatted The Terminal Profile command shall be issued with the facility "'9EXX' response code for SIM data download error" enabled The Envelope(SMS-PP) formatted has to be issued with the following features: No ciphering; Wrong Cryptographic checksum; proof of receipt response shall be sent using SMS-Deliver-Report; no security applied to proof of receiptData in plain text = "TEST"	No applet is triggered	The SIM answers to the Envelope with status words 9Exx and a PoR is retrieve with a GetResponse command. The Response Status Code Octet shall be '01'.

6.3.6.2.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1,2,3,4,5

6.3.7 Envelope Response Posting

- 6.3.7.1 EVENT_CALL_CONTROL_BY_SIM

Test Area Reference: FWK_ERP_ECCN

6.3.7.1.1 Conformance Requirements

Normal Execution

CRRN1: The SIM Toolkit Framework can't reply busy when an Envelope(Call Control) is sent to the SIM.

6.3.7.1.1 Test Area Files

Test Script: FWK_ERP_ECCN_1.scr

Test Applet: FWK_ERP_ECCN_1.java

----FWK_ERP_ECCN_2.java

-FWK_ERP_ECCN_3.java

Load Script: FWK_ERP_ECCN_1.ldr

Cleanup Script: FWK_ERP_ECCN_1.clr

Parameter File: FWK_ERP_ECCN_1.par

6.3.7.1.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Applet 1 is registered on the EVENT_CALL_CONTROL_BY_SIM, Applet2 is registered and triggered on the EVENT_MENU_SELECTION.		
	1-Applet2 invokes the method send()and no fetch is performed 2-Envelope(Call Control) is sent to the	Applet2 is suspended	
	SIM 3-Applet1 calls the method EnvelopeResponseHandler.postASBERTLV() to change any incoming dialling number into	Applet1 is triggered.	
	+11 22 33 44.		The SIM answer 9Fxx to the Envelope(Call Control) The dialling number is retrieved with a GetResponse command. The SIM answers to the Get Response command with status words 91xx.
	4-A Fetch command is sent to the SIM		
	5-A Terminal Response command is sent to the SIM 6-Delete applet1 & applet2	Applet2's execution shall continue.	
	7-Install applet3		

ld	Description	API/Framework Expectation	APDU Expectation
2	Applet 3 is registered on both the events EVENT_CALL_CONTROL_BY_SIM and EVENT_MENU_SELECTION.		
	1-Envelope Menu Selection is sent to the SIM.	Applet3 is triggered on the EVENT_MENU_SELECTION	
	2-Applet3 invokes the method send()and no fetch is performed)	Applet3 is suspended on the send() method	
	3-Envelope(Call Control) is sent to the SIM 4-Applet3 calls the method EnvelopeResponseHandler.postASBERTLV() to change any incoming dialling number into	Applet3 is triggered on the EVENT_CALL_CONTROL_BY_SI M.	The SIM answer 9Fxx to the Envelope(Call Control)
	+11 22 33 44. 5-A Fetch command is sent to the SIM 6-A Terminal Response command is sent to the SIM	The Applet3's execution shall continue.	The dialling number is retrieved with a GetResponse command. The SIM answers to the Get Response command with status words 91xx.

6.3.7.1.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1,2

- 6.3.7.2 EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM

Test Area Reference: FWK_ERP_EMCN

6.3.7.2.1 Conformance Requirements

Normal Execution

CRRN1: The SIM Toolkit Framework can't reply busy when an Envelope(MO-Short Message Control) is sent to the SIM.

6.3.7.2.2 Test Area Files

Test Script: FWK_ERP_EMCN_1.scr

Test Applet: FWK_ERP_EMCN_1.java

FWK_ERP_EMCN_2.java

FWK_ERP_EMCN_3.java

Load Script: FWK_ERP_EMCN_1.ldr

Cleanup Script: FWK_ERP_EMCN_1.clr

Parameter File: FWK_ERP_EMCN_1.par

6.3.7.2.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1d 1	Description Applet 1 is registered on the EVENT_MO_SHORT_MESSAGE_CONTROL_B Y_SIM; Applet2 is registered and triggered on the EVENT_MENU_SELECTION. . 1-Applet2 invokes the method send() and no fetch is performed) 2-Envelope(MO-SM control) is sent to the SIM 3-Applet1 calls the method EnvelopeResponseHandler.postASBERTLV() to change any incoming TP_Destination_Address and any RP_Destination_Address of the Service Center into +11 22 33 44	Applet2 is suspended Applet 1 is triggered.	The SIM answers 9Fxx to the Envelope(MO-Short Message Control)
			TP_Destination_Address is retrieved with a GetResponse command.
	4-A Fetch command is sent to the SIM		The SIM answers to the Get Response command with status words 91xx.
	5-A Terminal Response command is sent to the SIM		
	6-Delete applet1 & applet2	The Applet's execution shall continue.	
	7-Install applet3		

ld	Description	API/Framework Expectation	APDU Expectation
2	Applet 3 is registered on both the events EVENT_MO_SHORT_MESSAGE_CONTROL_B Y_SIM and EVENT_MENU_SELECTION.		
	1-Applet3 invokes the method send()and no fetch is performed)	Applet 3 is suspended on the send() method	
	2-Envelope(MO-SM control) is sent to the SIM 3-Applet3 calls the method EnvelopeResponseHandler.postASBERTLV() to	Applet3 is triggered on the EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM.	
	change any incoming TP_Destination_Address and any RP_Destination_Address of the Service Center into +11 22 33 44.		The SIM answers 9Fxx to the Envelope(MO-Short Message Control)
			The TP_Destination_Address is retrieved with a GetResponse command.
			The SIM answers to the Get Response command with status words 91xx.
	4-A Fetch command is sent to the SIM		
	5-A Terminal Response command is sent to the SIM		
		The Applet3's execution shall continue.	

6.3.7.2.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1,2

- 6.3.7.3 EVENT_UNRECOGNIZED_ENVELOPE

Test Area Reference: FWK_ERP_EUEN

6.3.7.3.1 Conformance Requirements

Normal Execution

CRRN1: The EnvelopeResponseHandler is available for the EVENT_UNRECOGNIZED_ENVELOPE.

6.3.7.3.2 Test Area Files

Test Script: FWK_ERP_EUEN_1.scr

Test Applet: FWK_ERP_EUEN_1.java

Load Script: FWK_ERP_EUEN_1.ldr

Cleanup Script: FWK_ERP_EUEN_1.clr

Parameter File: FWK_ERP_EUEN_1.par

6.3.7.3.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	An applet triggered on the	The post() method returns no	The SIM answers to the
	EVENT_UNRECOGNIZED_ENVELOPE calls the	exception	Envelope with status words
	EnvelopeResponseHandler.post() method		9Fxx. The data retrieved
			with the GetResponse
			command are the ones
			posted by the applet.

6.3.7.3.4 Test Coverage

CRR Number	Test Case Number
CRRN1	1

6.3.8 Toolkit Installation

- 6.3.8.1 Timers Allocation

Test Area Reference: FWK_TIN_TMAL

6.3.8.1.1 Conformance Requirements

Normal execution

CRRN1: One toolkit applet can register to several timers, but a timer can only be allocated to one toolkit applet.

Context errors

CRRC1: Allocated timers shall not exceed the maximum number of timers allowed for this applet instance defined during installation.

CRRC2: The total number of timers allocated for all the applets shall not exceed 8.

6.3.8.1.2 Test suite files

Test Script: FWK_TIN_TMAL_1.scr

Test Applet: FWK_TIN_TMAL_1.java

FWK_TIN_TMAL_2.java

FWK_TIN_TMAL_3.java

Load Script: FWK_TIN_TMAL_1.ldr

Cleanup Script: FWK_TIN_TMAL_1.clr

Parameter File: FWK_TIN_TMAL_1.par

6.3.8.1.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	More than 8 timers at the		
	instantiation of applet1: check		
	that applet1 is not installed or		
	that it is not possible to		
	allocate more than 8 timers.		The SIM answers to the
			Envelope with status words 90 00
	Install for install of applet1 with maximum 9 timers allocated.		90 00
	maximum 9 timers allocated.	Shall throw a ToolkitException with	2 behaviours may be
	applet1 is triggered: we allocate 9 timers	reason NO_TIMER_AVAILABLE	expected :
		only on the 9 th allocateTimer()	1. applet1 is not found,
		, , , , , , , , , , , , , , , , , , , ,	status word 6X XX
			applet1 has been
	applet1 is selected		installed and only 8 timers
			are allocated
	Reset the card and delete instance of applet1		
2	Good installation of applet2		The SIM answers to the
	Install for install of applet2 (maximum 4		Envelope with status words
	timers allocated).		90 00
			30 00
2	Allocate 4 timers	No avecantion about he through	
3	Anocate 4 timers Applet2	No exception shall be thrown.	
	Appletz		
4	Allocate one more timer	Shall throw a ToolkitException with	
	Applet2	reason NO_TIMER_AVAILABLE	
5	Good installation of applet3		
	Install for install of applet3 (maximum 8		The SIM answers to the
	timers allocated).		Envelope with status words
			90 00
	All de del		
6	Allocate 4 timers	No exception shall be thrown.	
	Applet3		
7	Allocate one more timer	Shall throw a ToolkitException with	
	Applet3	reason NO_TIMER_AVAILABLE	
	7.55.000	TOUGON TO_TIMET(_/(V/IIE/IBEE	
8	Check that each timerld (allocated by applet2		
	and applet3) is between 1 and 8 and is different		
	from each other		

6.3.8.1.4 Test Coverage

CRR number	Test case number
N1	2,3,8
C1	1, 7
C2	4,5,6

- 6.3.8.2 Item Identifier

Test Area Reference: FWK_TIN_ITID

6.3.8.2.1 Conformance Requirements

Normal execution

CRRN1: If the requested item identifier in the range [1-127] is not already allocated, then this item identifier shall be allocated to the current applet.

CRRN2: If the requested item identifier is '00', the card shall take the first free value in the range [128,255].

Parameters error

CRRP1: If the requested item identifier is in the range [128,255], then the card shall reject the install command.

Context errors

CRRC1: If the requested item identifier in the range [1-127] is already allocated, then the card shall reject the install command.

6.3.8.2.2 Test suite files

Test Script: FWK_TIN_ITID_1.scr

Test Applet: FWK_TIN_ITID-_1.java

FWK_TIN_ITID-_2.java

FWK_TIN_ITID-_3.java

Load Script: FWK_TIN_ITID-_1.ldr

Cleanup Script: FWK_TIN_ITID-_1.clr

Parameter File: FWK_TIN_ITID-_1.par

ld	Description	API/Framework Expectation	APDU Expectation
1	Bad installation of applet1		
	Install for install of applet1.The following parameters item Id equal to 128		applet1 is not found, status word 6X XX
	applet1 is selected		
2	Good installation of applet1		
	Install for install of applet1. item Id = 1 for the first menu and 127 for the second one		The SIM answers to the Envelope with status words 91xx to send back to the ME the 2 new menus.
	A Terminal Profile is sent to the card with only PROFILE_DOWNLOAD, SMS_PP_DOWNLOAD, MENU_SELECTION, SET_UP_MENU and COMMAND_RESULT facilities.		The menus are (position/itemId/text) 01/01/menu11 02/127/menu12
3	Bad installation of applet2 Item identifier already allocated		
	Install for install of applet2. item Id = 127		
	applet2 is selected		applet2 is not found, status
			word 6X XX
4	Good installation of applet2		
	<pre>Install for install of applet2. item Id = 0</pre>		The SIM answers to the Envelope with status words 91xx to send back to the ME the 3 menus.
			The menus are 01/01/menu11 02/127/menu12 03/128/menu21
5	Good installation of applet3		
	<pre>Install for install of applet3. item Id = 0</pre>		The SIM answers to the Envelope with status words 91xx to send back to the ME the 4 menus.
			The menus are 01/01/menu11 02/127/menu12 03/128/menu21 04/129/menu31
6	Good delete and installation of applet2		The CIM arresses to the
	Delete instance of applet2 Perform a RESET and a Terminal Profile with the facilities of PROFILE_DOWNLOAD, SMS-PP_DATA_DOWNLOAD, MENU_SELECTION, COMMAND_RESULT and SET_UP_MENU		The SIM answers to the Terminal Profile with status words 91xx to send back to the ME the 3 menus.
			The menus are

ld	Description	API/Framework Expectation	APDU Expectation
			01/01/menu11
			02/127/menu12
			03/129/menu31
	Install for install of applet2.		
	item Id = 0		
			The SIM answers to the
			Envelope with status words 91xx to send back to the ME
			the 4 menus.
			life 4 menus.
			The menus are
			01/01/menu11
			02/127/menu12
			03/128/menu21
			04/129/menu31

6.3.8.2.4 Test Coverage

CRR number	Test case number
N1	2
N2	4,5,6
P1	1
C1	3

_

- 6.3.8.3 Item Position

Test Area Reference: FWK_TIN_ITPO

6.3.8.3.1 Conformance Requirements

Normal execution

CRRN1: The position of the new menu entries is an absolute position among the existing ones.

CRRN2: If the position identifier is 00h, the menu shall have the last position

6.3.8.3.2 Test suite files

Test Script: FWK_TIN_ITPO_1.scr

Test Applet: FWK_TIN_-ITPO-_1.java

FWK_TIN_-ITPO-_2.java

FWK_TIN_-ITPO-_3.java

Load Script: FWK_TIN_-ITPO-_1.ldr

Cleanup Script: FWK_TIN_-ITPO-_1.clr

Parameter File: FWK_TIN_-ITPO-_1.par

6.3.8.3.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Installation of applet1	·	
	Perform Install for install of applet1.Position/ItemId 01/01 02/02		
	A Terminal Profile is sent to the card		The menus are (position/itemId/text) 01/01/menu11 02/02/menu12
2	Installation of applet2 Perform Install for install of applet2. Position/ItemId 03/03 04/04		The SIM answers to the Envelope with status words 91xx to send back to the ME the 4 menus.
	04/04		The menus are (position/itemId/text) 01/01/menu11 02/02/menu12 03/03/menu21 04/04/menu22
3	Installation of applet3 Perform Install for install of applet3. Position/ItemId 00/05		The SIM answers to the Envelope with status words 91xx to send back to the MI the 5 menus.
			The menus are (position/itemId/text) 01/01/menu11 02/02/menu12 03/03/menu21 04/04/menu22 05/05/menu31

6.3.8.3.4 Test Coverage

Note: As Item Position management is not fully specified in the [7] or [8] all possible tests cannot be performed.

CRR number	Test case number
N1	1,2
N2	3

- 6.3.8.4 Maximum Text Length for a menu entry

Test Area Reference: FWK_TIN_MLME

6.3.8.4.1 Conformance Requirements

Normal execution

CRRN1: The maximum length of item text string is defined at the installation of the toolkit applet.

Parameters errors

CRRP1: If initMenuEntry length parameter is greater than the allocated space (Maximum Text Length for a menu entry), then a ToolkitException ALLOWED_LENGTH_EXCEEDED is thrown.

CRRP2: If changeMenuEntry length parameter is greater than the allocated space (Maximum Text Length for a menu entry), then a ToolkitException ALLOWED_LENGTH_EXCEEDED is thrown.

6.3.8.4.2 Test suite files

Test Script: FWK_TIN_MLME_1.scr

Test Applet: FWK_TIN_MLME_1.java

Load Script: FWK_TIN_MLME_1.ldr

Cleanup Script: FWK_TIN_MLME_1.clr

Parameter File: FWK_TIN_MLME_1.par

6.3.8.4.3 Test Procedure

ld	Description	API / Framework Expectation	APDU Expectation
1	Installation of applet with 2 menus not		
	exceeding the maximum text length		
	Install one applet with 2 menu entries		
	allowed and max. text length equal to 10.		
	initMenuEntry defined at the install		
	(install) command		
	<pre>MenuEntry = "MenuEntry1", "MenuEntry2" Offset = 0</pre>		
	Length = 10		
	NextAction = '00'		
	HelpSupported = false		
	<pre>IconQualifier = '00'</pre>		
	<pre>IconIdentifier = 0</pre>		
2	initMenuEntry with a too large length	ToolkitException	
		ALLOWED_LENGTH_EXCEEDED	
	initMenuEntry with length equal to 11	is thrown	
	MenuEntry = " MenuEntry03"		
	Offset = 0		
	Length = 11		
	NextAction = '00'		
	<pre>HelpSupported = false IconOualifier = '00'</pre>		
	IconIdentifier = 0		
	Confidentifier = 0		
3	initMenuEntry with a right length		a SET UP MENU (2 items)
			is issued with TLV item
	initMenuEntry with length parameter equal		length equal to 11 (Identifier
	to 10		+ Text string of item)
	MenuEntry = " MenuEntry3"		I Toke string of item)
	Offset = 0		
	Length = 10		
	NextAction = '00'		
	<pre>HelpSupported = false IconOualifier = '00'</pre>		
	IconIdentifier = 0		
4	changeMenuEntry with a right length		a SET UP MENU (2 items)
			is issued with TLV item
	Applet1 is triggered by a		length equal to 11 (Identifier
	EVENT_MENU_SELECTION.		+ Text string of item)
	changeMenuEntry of menu 1, with length		
	parameter equal to 10		
	Id = '01'		
	MenuEntry = "MenuEntry4" Offset = 0		
	Length = menuEntry.length		
	NextAction = 0		
	HelpSupported = false		
	IconQualifier = 0		
	IconIdentifier = 0		
	Return from processToolkit		
5	changeMenuEntry with a too large length	ToolkitException	Shall not receive a SET UP
1	onangomonazina y with a too large longar	ALLOWED LENGTH EXCEEDED	

le	d Description	API / Framework Expectation	APDU Expectation
	Applet1 is triggered by a	is thrown	previous one
	EVENT_MENU_SELECTION.		
	ChangeMenuEntry of menu 1, with length		
	parameter equal to 11		
	Id = '02'		
	MenuEntry = "MenuEntry05"		
	Offset = 0		
	Length = menuEntry.length		
	NextAction = 0		
	<pre>HelpSupported = false</pre>		
	<pre>IconQualifier = 0</pre>		
	<pre>IconIdentifier = 0</pre>		
	Return from processToolkit		

6.3.8.4.4 Test Coverage

CRR number	Test case number
CRRN1	1, 3, 4
CRRP1	2
CRRP2	5

- 6.3.8.5 Maximum number of menu entries

Test Area Reference: FWK_TIN_NBME

6.3.8.5.1 Conformance Requirements

Normal execution

CRRN1: The maximum number of menu entries is defined at the installation of the toolkit applet and can be the maximum number of successful invocations of the method initMenuEntry .

Parameters errors

CRRP1: If the menu entry cannot be initialised (e.g. no more item data in applet loading parameter), a ToolkitException with the REGISTRY_ERROR reason code is thrown.

6.3.8.5.2 Test suite files

Test Script: FWK_TIN_NBME_1.scr

Test Applet: FWK_TIN_NBME_1.java

-----FWK_TIN_NBME_2.java

Load Script: FWK_TIN_NBME_1.ldr

Cleanup Script: FWK_TIN_NBME_1.clr

Parameter File: FWK_TIN_NBME_1.par

6.3.8.5.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Installation of applet with 3 menus	No Exception is thrown	
	<pre>Install (install) applet with max. number of menu entry is '3', defined at the install (install) command. initMenuEntry for each menu entry allowed (3 times) MenuEntry = "menul", "menu2", "menu3" Offset = 0</pre>		

ld	Description	API/Framework Expectation	APDU Expectation
	Length = 5		
	NextAction = '00'		
	HelpSupported = false		
	<pre>IconQualifier = '00'</pre>		
	<pre>IconIdentifier = 0</pre>		
2	init of a 4 th menu	ToolkitException REGISTRY_ERROR is thrown	SET UP MENU (3 items) is issued with TLV item length
	initMenuEntry one more time		equal to 6 (Identifier + Text
	MenuEntry = "menu4"		string of item)
	Offset = 0		J9 5,
	Length = 5		
	NextAction = '00'		
	HelpSupported = false		
	<pre>IconQualifier = '00'</pre>		
	<pre>IconIdentifier = 0</pre>		
	and a second		
3	Installation of 2 nd applet with 0 menu	ToolkitException REGISTRY_ERROR is thrown	Shall not receive a SET UP MENU different from the
	Install (install) another applet, with		previous one
	max. number of menu entry is '0', defined		•
	at the install (install) command.		
	initMenuEntry once		
	MenuEntry = "menu1"		
	Offset = 0		
	Length = 5		
	NextAction = '00'		
	HelpSupported = false		
	IconQualifier = '00'		
	IconIdentifier = 0		<u> </u>

6.3.8.5.4 Test Coverage

CRR number	Test case number	
CRRN1	1	
CRRP1	2, 3	

- 6.3.8.6 Access Domain

Test Area Reference: FWK_TIN_ACDO 6.3.8.6.1 Conformance Requirements

Normal execution

CRRN1: The Access Domain parameter indicates the mechanism used to control the applet instance access to the GSM file System ('00' means full access to the GSM File System, 'FF' means no access to the GSM File System).

Parameters errors

CRRP1: If the Access Domain Parameter requested is not supported, the card shall return the Status Word '6A80', incorrect parameters in data field, to the Install(Install) command.

CRRP2: If an applet with Access Domain Parameter 'FF' (i.e. No Access to the GSM File System) tries to access a GSM file (e.g. invoke the updateBinary(..) method) the framework shall throw a SIMViewException with a AC_NOT_FULFILLED reason.

6.3.8.6.2 Test suite files

Test Script: FWK_TIN_ACDO_1.scr

Test Applet: FWK_TIN_ACDO_1.java

----FWK_TIN_ACDO_2.java

----FWK_TIN_ACDO_3.java

Load Script: FWK_TIN_ACDO_1.ldr
Cleanup Script: FWK_TIN_ACDO_1.clr

Parameter File: FWK_TIN_ACDO_1.par

6.3.8.6.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
0	Install (install) applet1 with:		•
	- Length of Access Domain field value is		
	- Access Domain Parameter value is '00'		
	(full access to the GSM File System)		
	Tuntall (in tall) and let 0 with.		
	<pre>Install (install) applet2 with: - Length of Access Domain field value is</pre>		
	'1'		
	- Access Domain Parameter value is		
	`FF' (No access to the GSM File		
	System)		
	Install (install) applet3 with:		
	- Length of Access Domain field value is		
	- Access Domain Parameter value is '00'		
	(full access to the GSM File System)		
1	and Discount and Described with full		
1	readBinary/readRecord method with full Access Domain Parameter	1 to 4- no exception is thrown	
	Access Domain Farameter		
		5- SIMViewException	
	1- Select EF-TARU file whose Read access condition is ALWAYS	AC_NOT_FULFILLED is thrown	
	Perform the readBinary method:		
	fileOffset = 0		
	resp = abRead[]		
	respOffset = 0 respLength = 3		
	respicing in - 3		
	2- Select EF-SMS file whose Read access		
	condition is CHV1 Perform the readRecord method:		
	refrorm the readnessia method.		
	recNumber = 1		
	<pre>mode = REC_ACC_MODE_ABSOLUTE_CURRENT recOffset = 0</pre>		
	resp = abRead[]		
	respOffset = 0		
	respLength = 3		
	3- Select EF-TRAC file whose Read access		
	condition is CHV2		
	Perform the readBinary method:		
	<pre>fileOffset = 0 resp = abRead[]</pre>		
	respOffset = 0		
	respLength = 3		
	4- Select EF-SUME file Read access		
	condition is ADMO		
	Perform the readBinary method:		
	<pre>fileOffset = 0 resp = abRead[]</pre>		
	respOffset = 0		
	respLength = 3		
	5- Select EF-TNR file whose Read access		
	condition is NEVER		
	Perform the readBinary method:		
	fileOffset = 0		

ld	Description	API/Framework Expectation	APDU Expectation
	<pre>resp = abRead[] respOffset = 0 respLength = 3</pre>		
2	updateBinary/updateRecord method with full Access Domain Parameter	1 to 4- no exception is thrown	
	For each case, send an Envelope that triggers the applet with the EVENT_UNFORMATTED_SMS_PP_ENV event.	5- SIMViewException AC_NOT_FULFILLED is thrown	
	<pre>1- Select EF-TNR file whose Update access condition is ALWAYS Perform the updateBinary method: fileOffset = 0 resp = abUpdate[FFFFFF] respOffset = 0 respLength = 3</pre>		
	2- Select EF-SMS file whose Update access condition is CHV1 Perform the updateRecord method: recNumber = 1 mode = REC_ACC_MODE_ABSOLUTE_CURRENT recOffset = 0resp = abUpdate[] respOffset = 0 respLength = 3		
	3- Select EF-FDN file whose Update access condition is CHV2 Perform the updateBinary method: recNumber = 1 mode = REC_ACC_MODE_ABSOLUTE_CURRENT recOffset = 0 resp = abUpdate[] respOffset = 0 respLength = 3		
	4- Select EF-SUME file Update access condition is ADMO Perform the updateBinary method: fileOffset = 0 resp = abUpdate[] respOffset = 0 respLength = 3		
	5- Select EF-TNU file whose Update access condition is NEVER Perform the updateBinary method: fileOffset = 0 resp = abUpdate[] respOffset = 0 respLength = 3		
3	invalidate method with full Access Domain Parameter	1 to 4- no exception is thrown	
	1- Select EF-TNR file whose Invalidate access condition is ALWAYS Perform the invalidate method	5- SIMViewException AC_NOT_FULFILLED is thrown	
	2- Select EF-TIAC file whose Invalidate access condition is CHV1 Perform the invalidate method		
	3- Select EF-ADN file whose Invalidate access condition is CHV2 Perform the invalidate method		
	4- Select EF-SUME file Invalidate access condition is ADMO Perform the invalidate method		

ld	Description	API/Framework Expectation	APDU Expectation
	5- Select EF-CNIV file whose Invalidate	4	- 10,00000000000000000000000000000000000
	access condition is NEVER Perform the invalidate method		
	refront the invariance method		
4	rehabilitate method with full Access Domain	1 to 4- no exception is thrown	
	Parameter		
		5- SIMViewException	
	1- Select EF-TNR file whose Rehabilitate access condition is ALWAYS	AC_NOT_FULFILLED is thrown	
	Perform the rehabilitate method		
	2- Select EF-IMSI file whose Rehabilitate		
	access condition is CHV1		
	Perform the rehabilitate method		
	3- Select EF-ADN file whose Rehabilitate		
	access condition is CHV2 Perform the rehabilitate method		
	Perform the renabilitate method		
	4- Select EF-SUME file Rehabilitate access		
	condition is ADM0 Perform the rehabilitate method		
	E Cologt BE CNDT Sile share Debutility		
	5- Select EF-CNRI file whose Rehabilitate access condition is NEVER		
	Perform the rehabilitate method		
5	increase method with full Access Domain	1 to 4- no exception is thrown	
	Parameter		
		5- SIMViewException	
	1- Select EF-CNU file whose Increase	AC_NOT_FULFILLED is thrown	
	access condition is ALWAYS	7.60101102.12222.101.1101.111	
	<pre>Perform the increase method: incr = abIncreaseValue[]</pre>		
	<pre>incr = abincreasevalue[] incr0ffset = 0</pre>		
	resp = abRead[]		
	respOffset = 0		
	2- Select EF-ACM file whose Increase		
	access condition is CHV1		
	Perform the increase method:		
	<pre>incr = abIncreaseValue[]</pre>		
	<pre>incrOffset = 0 resp = abRead[]</pre>		
	respOffset = 0		
	3- Select EF-CIAC file whose Increase		
	access condition is CHV2		
	Perform the increase method:		
	<pre>incr = abIncreaseValue[] incrOffset = 0</pre>		
	resp = abRead[]		
	respOffset = 0		
	4- Select EF-CIAA file Increase access		
	condition is ADM0		
	<pre>Perform the increase method: incr = abIncreaseValue[]</pre>		
	<pre>incr = abincreasevalue[] incr0ffset = 0</pre>		
	resp = abRead[]		
	respOffset = 0		
	5- Select EF-CNR file whose Increase		
	access condition is NEVER		
	Perform the increase method		
5	Applet1 finalizes	CIM//iowEvention	
כ	readBinary method with no Access Domain Parameter	SIMViewException AC_NOT_FULFILLED is thrown	
	Send an Envelope that triggers the applet		

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ld	Description	API/Framework Expectation	APDU Expectation
	event.		
	Select EF-TARU file whose Read access		
	condition is ALWAYS Perform the readBinary method:		
	fileOffset = 0		
	resp = abRead[]		
	respOffset = 0 respLength = 3		
	t		
7	updateRecord method with no Access Domain Parameter	SIMViewException AC_NOT_FULFILLED is thrown	
	Send an Envelope that triggers the applet with the EVENT_UNFORMATTED_SMS_PP_ENV event.		
	Select EF-SMS file whose Update access		
	condition is CHV1 Perform the updateRecord method:		
	fileOffset = 0		
	resp = abUpdate[] respOffset = 0		
	respLength = 3		
8	invalidate method with no Access Domain	SIMI/iowEveentien	
0	Parameter	SIMViewException AC_NOT_FULFILLED is thrown	
	Send an Envelope that triggers the applet with the EVENT_UNFORMATTED_SMS_PP_ENV event.		
	Select EF-ADN file whose Invalidate access condition is CHV2 Perform the invalidate method		
9	rehabilitate method with no Access Domain	SIMViewException	
	Parameter	AC_NOT_FULFILLED is thrown	
	Send an Envelope that triggers the applet with the EVENT_UNFORMATTED_SMS_PP_ENV event.		
	Select EF-SUME file Rehabilitate access		
	condition is ADMO		
	Perform the rehabilitate method		
10	increase method with no Access Domain Parameter	SIMViewException AC_NOT_FULFILLED is thrown	
	Send an Envelope that triggers the applet with the EVENT_UNFORMATTED_SMS_PP_ENV event.		
	Select EF-CNR file whose Increase access condition is NEVER Perform the increase method		
	Applet2 finalizes	Applet2 finalizes	
	Applet3 restore EF SUME	Applet3 restore EF-SUME	

6.3.8.6.4 Test Coverage

Note: As Item Position management is not fully specified in the [7] or [8] all possible tests cannot be performed.

CRR number	Test case number
CRRN1	1, 2, 3, 4, 5
CRRP1	Not tested
CRRP2	6, 7, 8, 9, 10

- 6.3.8.7 Priority Level

Test Area Reference: FWK_TIN_PRLV

6.3.8.7.1 Conformance Requirements

Normal execution

CRRN1: The priority specifies the order of activation of an applet compared to the other applet registered to the same event ('01': Highest priority level, 'FF': Lowest priority level)

CRRN2: If two or more applets are registered to the same event and have the same priority level, the applets are activated according to their installation date (i.e. the most recent applet is activated first)

6.3.8.7.2 Test suite files

Test Script: FWK_TIN_PRLV_x.scr, x from 1 to 12

Test Applet: FWK_TIN_PRLV_x.java, x from 1 to 12, 8A, 8B, 9A, 9B, 10A,

10B

Load Script: FWK_TIN_PRLV_x.ldr, x from 1 to 12
Cleanup Script: FWK_TIN_PRLV_x.clr, x from 1 to 12

Parameter File: FWK_TIN_PRLV_x.par, x from 1 to 12,7 8A, 8B, 9A, 9B, 10A,

10B

6.3.8.7.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
0	All applets are registered on an		
	EVENT_UNFORMATTED_SMS_PP_ENV event		
1	Trigger 2 applets with 2 different maximum Priority Levels		
	<pre>Install (install) applet1 with priority level '2' and applet2 with priority level '1', from package fwk_tin_prlv_1.</pre>		
	Send an Envelope that triggers the 2 applets with the EVENT_UNFORMATTED_SMS_PP_ENV event.	A static variable is used to validate triggering order: applet2 is triggered before applet1	
	Delete applets instances and packages		

2	Trigger 2 applets with 2 different maximum Priority Levels		
	<pre>Install (install) applet1 with priority level '1' and applet2 with priority level '2', from package fwk_tin_prlv_2.</pre>		
	Send an Envelope that triggers the 2 applets with the EVENT_UNFORMATTED_SMS_PP_ENV event.		
	Delete applets instances and packages	A static variable is used to validate triggering order: applet1 is triggered before applet2.	
3	Trigger 2 applets with 2 different Priority Levels		
	<pre>Install (install) applet1 with priority level '80' and applet2 with priority level '7F', from package fwk_tin_prlv_3.</pre>		
	Send an Envelope that triggers the 2 applets with the EVENT_UNFORMATTED_SMS_PP_ENV event.		
	Delete applets instances and packages	A static variable is used to validate triggering order: applet2 is triggered before applet1	
4	Trigger 2 applets with 2 different Priority Levels		
	Install (install) applet1 with priority level '7F' and applet2 with priority level '80', from package fwk_tin_prlv_4.		
	Send an Envelope that triggers the 2 applets with the EVENT_UNFORMATTED_SMS_PP_ENV event.		
	Delete applets instances and packages	A static variable is used to validate triggering order: applet2 is triggered before applet1	
5	Trigger 3 applets with the same Priority Level		
	Install (install) applet 1, 2, 3 in this order with same priority level from package fwk_tin_prlv_5.		
	Send an Envelope that triggers the 3 applets with the EVENT_UNFORMATTED_SMS_PP_ENV event.		
	Delete applets instances and packages.	A static variable is used to validate triggering order: applet3 is triggered before applet2, and applet2 is triggered before applet1.	

6	Trigger 2 applets from 2 classes, with 2		
	different Priority Level		
	Install (install) applet1 from class A with priority level `2'		
	Install (install) applet2 from class B with priority level `1'		
	Send an Envelope that triggers the 2 applets with the EVENT_UNFORMATTED_SMS_PP_ENV event.		
	Delete applets instances and packages	A static variable is used to validate triggering order: applet2 is triggered before applet1	
7	Trigger 2 applets from 2 classes, with the same		
	Priority Level		
	Install (install) applet1 from class A with priority level `1'		
	Install (install) applet2 from class B with priority level `1'		
	Send an Envelope that triggers the 2 applets with the		
	EVENT_UNFORMATTED_SMS_PP_ENV event. Delete applets instances and packages	A static variable is used to validate	
		triggering order: applet2 is triggered before applet1	
8	Trigger 2 applets from 2 packages, with 2 different Priority Level		
	Install package fwk_tin_prlv_8. Install (install) applet1 from package fwk_tin_prlv_8A with priority level '2' Install (install) applet2 from package fwk_tin_prlv_8B with priority level '1'		
	Send an Envelope that triggers the 2 applets with the EVENT_UNFORMATTED_SMS_PP_ENV event.		
	Delete applets instances ad packages	A static variable is used to validate triggering order: applet2 is triggered before applet1	
9	Trigger 2 applets from 2 packages, with the same Priority Level		
	Install package fwk_tin_prlv_9. Install (install) applets 1 from package fwk_tin_prlv_9A and applet2 from package fwk_tin_prlv_9B in this order, with same priority level		
	Send an Envelope that triggers the 2 applets with the EVENT_UNFORMATTED_SMS_PP_ENV event.	A static variable is used to validate	
	Delete applets instances and packages	triggering order: applet2 is triggered before applet1	
10	Trigger 4 applets from 2 packages		
	1-Install packages fwk_tin_prlv_10, fwk_tin_prlv_10B.		

stall (install) 2 applets 1 then 2 from ackage fwk_tin_prlv_10A, with espectively priority levels 1 and 2.		
deposition priority revers I ama 1.		
end an Envelope that triggers the 2		
-		
com package fwk_tin_prlv_10B, with		
	1- A static variable is used to validate triggering order: applet1 is	
elete applets instances and packages	linggered before appletz	
	approto :, :, ::::::::::::::::::::::::::::::	
Trackell (install) and at 1 2 2 4 in		
nis order with same priority level from		
elete applet instance 4	1- A static variable is used to	
	are triggered in order 4, 3, 2, 1.	
pplets with the		
olete anniet instance ?		
pplets with the	2- Applets are triggered in order 3, 2, 1.	
elete remaining applet instances and		
ackages		
	3- Applets are triggered in order 2, 1.	
rigger 5 applets with different Priority Levels, alternating install and delete		
nis order with respective priority levels		
pplets with the		
	1 A statio variable is was dis-	
	validate triggering order: applets	
Delete applet instance 1 and install nstall) applet5 with priority level 2	are triggered in order 3, 1, 4, 2	
	Poplets with the VENT_UNFORMATTED_SMS_PP_ENV event. - Install (install) 2 applets 3 then 4 com package fwk_tin_prlv_10B, with espectively priority levels 1 and 2. and an Envelope that triggers the 4 coplets. - End an Envelope that triggers the 4 coplets. - Elete applets instances and packages - Install (install) applet1, 2, 3, 4 in mis order with same priority level from ackage fwk_tin_prlv_11. - and an Envelope that triggers the 4 coplets with the VENT_UNFORMATTED_SMS_PP_ENV event. - Send an Enveloppe that triggers the 3 coplets with the VENT_UNFORMATTED_SMS_PP_ENV event. - Selete applet instance 4 - Send an Enveloppe that triggers the 3 coplets with the VENT_UNFORMATTED_SMS_PP_ENV event. - Selete applet instance 3 - Send an Enveloppe that triggers the 2 coplets with the VENT_UNFORMATTED_SMS_PP_ENV event. - Selete applet instance 3 - Send an Enveloppe that triggers the 2 coplets with the VENT_UNFORMATTED_SMS_PP_ENV event. - Selete applet instances and ackages - Send an Enveloppe that triggers the 2 coplets with the VENT_UNFORMATTED_SMS_PP_ENV event.	Party with the CENT_UNFORMATTED_SMS_PP_ENV event. Install (install) 2 applets 3 then 4 com package fwk_tin_prlv_10B, with respectively priority levels 1 and 2. and an Envelope that triggers the 4 pplets. Selete applets instances and packages 2- Applet3 is triggered before applet2 it triggered before applet3 is triggered before applet3 is triggered before applet4. 2- Applet3 is triggered before applet5 1, 4, then 2. 1- A static variable is used to validate triggering order: applet6 applet8 1, 4, then 2. 2- Applet3 is triggered before applet8 1, 4, then 2. 1- A static variable is used to validate triggered before applet8 1, 4, then 2. 1- A static variable is used to validate triggering order: applet8 are triggered in order 4, 3, 2, 1. 2- Applet8 are triggered in order 3, 2, 1. 2- Applet8 are triggered in order 3, 2, 1. 2- Applet8 are triggered in order 3, 2, 1. 2- Applets are triggered in order 2, 1. 1- A static variable is used to validate triggering order: applet8 are triggered in order 3, 2, 1. 2- Applet8 are triggered in order 3, 2, 1. 2- Applet8 are triggered in order 2, 1. 1- A static variable is used to validate triggering order: applet8 are triggered in order 3, 2, 1. 2- Applet8 are triggered in order 2, 1. 1- A static variable is used to validate triggering order: applet8 are triggered in order 3, 2, 1. 2- Applet8 are triggered in order 2, 1. 1- A static variable is used to validate triggering order: applet8 are triggered in order 3, 2, 1.

applets with the EVENT_UNFORMATTED_SMS_PP_ENV event.		
3- Re-install (install) applet1 with priority level 1	2- Applets are triggered in order 3, 5, 4, 2	
Send an Enveloppe that triggers the 5 applets with the EVENT_UNFORMATTED_SMS_PP_ENV event.		
	3- Applets are triggered in order 1, 3, 5, 4, 2	

6.3.8.7.4 Test Coverage

CRR number	Test case number	
CRRN1	1, 2, 3, 4, 6, 8, 10, 12	
CRRN2	5, 7, 9, 11	

6.3.9 File System Context

- 6.3.9.1 Initial Context

Test Area Reference: FWK_FSC_INIT

6.3.9.1.1 Conformance Requirements

Normal Execution

CRRN1: At the invocation of the processToolkit method of a toolkit applet, the current file is the MF.

6.3.9.1.2 Test Suite Files

Test Script: FWK_FSC_INIT_1.scr

Test Applet: FWK_FSC_INIT_1.java

FWK_FSC_INIT_2.java

Load Script: FWK_FSC_INIT_1.ldr

Cleanup Script: FWK_FSC_INIT_1.clr

FWK_FSC_INIT_2.clr

Parameter File: FWK_FSC_INIT_1.par

6.3.9.1.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
0	SIM Initialisation	Responses ignored.	
1	<pre>MF is the selected DF in processToolkit() An ENVELOPE APDU containing a formatted SMS PP for Applet 1 is issued to the SIM byte[] fci = new byte[10] fciOffset = 0 fciLength = 7 status()</pre>	No exception shall be thrown. Shall return 7. fci shall contain the following part of the FCI structure: < XX XX XX XX 3F 00 01 >	
2	No EF is selected rehabilitate ()	SIMView exception shall be thrown with reason NO_EF_SELECTED	
3	MF is selected even when an applet triggered before selected any other file	1 - No exception shall be thrown.	

ld	Description	API/Framework Expectation	APDU Expectation
		2 - No exception shall be thrown.	
	Applets 1 and 2 register to	Shall return 7.	
	EVENT_DOWNLOAD_USER_ACTIVITY. Applet 1 has	fci shall contain the following part of	
	higher priority than Applet 2.	the FCI structure:	
		< XX XX XX XX 3F 00 01 >	
	An ENVELOPE "EVENT - USER ACTIVITY" is sent to the SIM		
	Sent to the Sim	3 - SIMView exception shall be	
	1 - Applet 1:	thrown with reason	
	- is triggered by	NO EF SELECTED	
	event_event_download_user_activity		
	- selects DF_GSM and EF_IMSI		
	2 - Applet 2:		
	- is triggered by		
	event_event_download_user_activity		
	fciOffset = 0		
	fciLength = 7		
	status()		
	3 - rehabilitate ()		

6.3.9.1.4

Test Coverage

CRR Number	Test Case Number	
CRRN1	1, 2, 3	

- 6.3.9.2 Context Preservation (current file)

Test Area Reference: FWK_FSC_CUFI

6.3.9.2.1 Conformance Requirements

Normal execution

CRRN1: When calling the method select (), the current files (file context) of any other applets shall not be changed (see GSM 03.19 [] - $\S5.2$).

CRRN2: The select() methods select a file without changing the current file of any other applet or of the subscriber session.

CRRN3: After invocation of ProactiveHandler.send() method: the current file context of the toolkit applet is unchanged (see GSM 03.19 [] - §5.2.).

6.3.9.2.2 Test Suite Files

Test Script: FWK_FSC_CUFI_1.scr

Test Applet: FWK_FSC_CUFI_1.java

FWK_FSC_CUFI_2.java

Load Script: FWK_FSC_CUFI_1.ldr

Cleanup Script: FWK_FSC_CUFI_1.clr

FWK_FSC_CUFI_2.clr

Parameter File: FWK_FSC_CUFI_1.par

6.3.9.2.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
0	SIM Initialisation	Responses ignored.	
1	No change to file context by another applet Applet1 registers to EVENT_FORMATTED_SMS_PP_ENV. Applet2 registers to EVENT_CALL_CONTROL_BY_SIM	1 - No exception shall be thrown. 2 - No exception shall be thrown. 3 - No exception shall be thrown. The value of buffer2 is { 0xCA, 0xFE }	A GET INKEY proactive command is fetched from the SIM
	<pre>1 - Applet 1: - is triggered by a formatted SMS - selects DF_SIMTEST and EF_TARU - fileOffset = 0; dataLength = 2; dataOffset = 0; - buffer = {0xCA, 0xFE } - updateBinary (): first 2 bytes of EF_TARU are written as 'CA FE' issues a proactive command "Get Inkey".</pre>		
	2 - An ENVELOPE APDU containing a CALL CONTROL BY SIM is issued to the SIM Applet 2:		
	- is triggered by a CALL CONTROL BY SIM - selects DF_TELECOM and EF_ADN.		
	<pre>3 - The terminal response for Get Inkey reactivates Applet 1: - fileOffset = 0; respLength = 2; respOffset = 0; - readBinary () info buffer2</pre>		
2	No change to file context by subscriber session 1 - Applet 1 - issues a proactive command "Get Inkey".	1 - No exception shall be thrown. 3 - No exception shall be thrown. The value of buffer2 is { 0xCA, 0xFE }	1 - A GET INKEY proactive command is fetched from the SIM
	2 - Subscriber session selects DF_TELECOM and EF_ADN.		
	<pre>3 - The terminal response for Get Inkey reactivates Applet 1: - fileOffset = 0; respLength = 2; respOffset = 0; - readBinary () info buffer2</pre>		
3	No change by applet of subscriber session context 1 - Applet 1: - selects DF_SIMTEST and EF_TNU	No exception shall be thrown. No exception shall be thrown.	1 - A GET INKEY proactive command is fetched from the SIM
	- issues a proactive command "Get Inkey". 2 - subscriber session reads record 1 of current file (shall be EF_ADN) 3 - The terminal response for Get Inkey reactivates Applet 1, which terminates		2 - READ RECORD absolute number 1 shall read "FF FF FF FF FF FF FF FF FF FF FF FF FF FF
	execution		EF _{ADN})

6.3.9.2.4 Test Coverage

CRR Number	Test Case Number	
CRRN1	1	
CRRN2	1,2,3	
CRRN3	1,2	

6.3.9.3 Context Preservation (current record pointer)

Test Area Reference: FWK_FSC_CURE

6.3.9.3.1 Conformance Requirements

Normal execution

CRRN1: When the seek method is called by one applet, the record pointer of any other applet is not changed.

CRRN2: updateRecord: the current record pointer of other applets / subscriber shall not be changed in case of linear fixed EF

CRRN3: *updateRecord*: the record pointer of a cyclic EF shall be changed for all other applets / subscriber to the record number 1.

CRRN4: *readRecord*: read data bytes of the linear fixed or cyclic EF currently selected by the applet without changing the current record pointer of any other applet / subscriber.

CRRN5: *increase*: the last updated record of the cyclic EF currently selected becomes record number 1 for every other applet and subscriber session.

6.3.9.3.2 Test Suite Files

Test Script: FWK_FSC_CURE_1.scr

Test Applet: FWK_FSC_CURE_1.java

FWK_FSC_CURE_2.java

Load Script: FWK_FSC_CURE_1.ldr

Cleanup Script: FWK_FSC_CURE_1.clr

FWK_FSC_CURE_2.clr

Parameter File: FWK_FSC_CURE_1.par

6.3.9.3.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
0	SIM Initialisation	Responses ignored.	
1	Seek without affecting another record pointer Applet1 registers to EVENT_FORMATTED_SMS_PP_ENV Applet 2 registers to EVENT_CALL_CONTROL_BY_SIM	1 - No exception shall be thrown.2 - No exception shall be thrown.3 - No exception shall be thrown.	1 - A GET INKEY proactive command is fetched from the SIM
	1 - Applet 1: - is triggered by a formatted SMS event - selects DF_SIMTEST and EF_LARU - reads record 2 using NEXT so that the current record pointer is set to record 2 - issues a proactive command, e.g. Get Inkey.		
	2 - An ENVELOPE APDU containing a CALL CONTROL BY SIM is issued to the SIM		
	Applet 2: - is triggered by a CALL CONTROL event - selects DF_SIMTEST and EF_LARU - performs a seek of pattern {0x55} from beginning forward, which finds record 1 returns from processToolkit		
	3 - The terminal response for Get Inkey		

ld	Description	API/Framework Expectation	APDU Expectation
	<pre>reactivates Applet 1: - call readRecord() using CURRENT - the record read should still be record 2 of EF_LARU, containing {0xAA, 0xAA, 0xAA, 0xAA}</pre>		
2	updateRecord in linear fixed EF without affecting current pointer of others 1 - Applet 1: - is triggered by a formatted SMS event - selects DF_SIMTEST and EF_LARU - reads record 2 using NEXT so that the current record pointer is set to record 2 - issues a proactive command, e.g. Get Inkey. 2 - An ENVELOPE APDU containing a CALL CONTROL BY SIM is issued to the SIM Applet 2: - is triggered by a CALL CONTROL BY SIM event - selects DF_SIMTEST and EF_LARU - updates record 1, by using mode "NEXT" returns from processToolkit 3 - The terminal response for Get Inkey reactivates Applet 1: - call readRecord() using CURRENT	No exception shall be thrown. No exception shall be thrown. No exception shall be thrown.	1 - A GET INKEY proactive command is fetched from the SIM
	<pre>- the record read should still be record 2 of EF_LARU, containing {0xAA, 0xAA, 0xAA, 0xAA}</pre>		
3	readRecord in linear fixed EF without affecting	1 - No exception shall be thrown.2 - No exception shall be thrown.3 - No exception shall be thrown.	1 - A GET INKEY proactive command is fetched from the SIM
	- selects DF_SIMTEST and EF_LARU - reads record 1, by using mode "NEXT" returns from processToolkit 3 - The terminal response for Get Inkey reactivates Applet 1: - call readRecord() using CURRENT - the record read should still be record 2 of EF_LARU, containing {0xAA, 0xAA, 0xAA, 0xAA,		

6.3.9.3.4 Test Coverage

CRR Number	Test Case Number	
CRRN1	1	
CRRN2	2	
CRRN3	not tested (see Note)	
CRRN4	3	
CRRN5	not tested (see Note)	

Note: These requirements have not been tested because of an inconsistent behavior in 03.19, which is foreseen to be corrected in future releases.

6.3.10 Other parts transferred to framework from API

- 6.3.10.1 A handler is a temporary JCRE Entry Point object

Test Area Reference: FWK_API_HEPO

6.3.10.1.1 Conformance Requirement:

Normal execution

CRRN1: The EnvelopeHandler is a Temporary JCRE Entry Point Object (see Javacard 2.1 Runtime Environment (JCRE) Specification [12]).

CRRN2: The EnvelopeResponseHandler is a Temporary JCRE Entry Point Object (see Javacard 2.1 Runtime Environment (JCRE) Specification [12]).

CRRN3: The ProactiveHandler is a Temporary JCRE Entry Point Object (see Javacard 2.1 Runtime Environment (JCRE) Specification [12]).

CRRN4: The ProactiveResponseHandler is a Temporary JCRE Entry Point Object (see Javacard 2.1 Runtime Environment (JCRE) Specification [12]).

Parameters error

Context errors

6.3.10.1.2 Test suite files

Test Script: FWK_API_HEPO_1.scr

Test Applet: FWK_API_HEPO_1.java

Load Script: FWK_API_HEPO_1.ldr

Cleanup Script: FWK_API_HEPO_1.clr

Parameter File: FWK_API_HEPO_1.par

6.3.10.1.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	EnvelopeHandler.getTheHandler and store it in	SecurityException is thrown	•
	a static field of the toolkit applet		
2	EnvelopeHandler.getTheHandler and store it in	SecurityException is thrown	
	a field of the toolkit applet		
3	EnvelopeResponseHandler.getTheHandler and	SecurityException is thrown	
	store it in a static field of the toolkit applet		
4	EnvelopeResponseHandler.getTheHandler and	SecurityException is thrown	
	store it in a field of the toolkit applet		
5	ProactiveHandler.getTheHandler and store it in	SecurityException is thrown	
	a static field of the toolkit applet		
6	ProactiveHandler.getTheHandler and store it in	SecurityException is thrown	
	a field of the toolkit applet		
7	Build and send a DISPLAY TEXT command to		
	be able to get the reference of the		Proactive command fetched
	ProactiveReponseHandler		and terminal response is
			issued
	ProactiveResponseHandler.getTheHandler and	SecurityException is thrown	
	store it in a static field of the toolkit applet		
8	ProactiveResponseHandler.getTheHandler and	SecurityException is thrown	
	store it in a field of the toolkit applet		

6.3.10.1.4 Test Coverage

CRR number	Test case number	
N1	1, 2	
N2	3, 4	
N3	5, 6	
N4	7, 8	

- 6.3.10.2 Transaction

Test Area Reference: FWK_API_TRAN

6.3.10.2.1 Conformance Requirement:

Normal execution

CRRN1: A pending toolkit applet transaction at the ProactiveHandler.send() method invocation is aborted..

6.3.10.2.2 Test suite files

Test Script: FWK_API_TRAN_1.scr

Test Applet: FWK_API_TRAN_1.java

Load Script: FWK_API_TRAN_1.ldr

Cleanup Script: FWK_API_TRAN_1.clr

Parameter File: FWK_API_TRAN_1.par

6.3.10.2.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	Verify that transaction is aborted when a		
	proactive command is sent		
	Initialise a byte field with 0x05		
	Build a display text proactive command.		
	beginTransaction()		
	Update the byte with 0x02		
	send the proactive command		
			Proactive command fetched
			and terminal response is
			issued
	Verify that the byte value is 0x05		
	JCSystem.getTransactionDepth()	Shall return 0	

6.3.10.2.4 Test Coverage

CRR number	Test case number
N1	1

- 6.3.10.3 Timer Id between Applets

Test Area Reference: FWK_API_TMID

6.3.10.3.1 Conformance Requirement:

Context errors

CRRC1: The method ToolkitRegistry.releaseTimer() shall throw a ToolkitException with INVALID_TIMER_ID reason if the timer is valid but isn't allocated to this applet.

6.3.10.3.2 Test suite files

Test Script: FWK_API_TMID_1.scr

Test Applet: FWK_API_TMID_1.java

Load Script: FWK_API_TMID_1.ldr

Cleanup Script: FWK_API_TMID_1.clr

Parameter File: FWK_API_TMID_1.par

6.3.10.3.3 Test Procedure

ld	Description	API/Framework Expectation	APDU Expectation
1	During installation :		
	First instance allocate a timer and store the		
	returned value in a static field.		
	Second instance allocate a timer.		
	Trig second instance and try to releaseTimer()	releaseTimer() shall throw a	
	with the static field value.	ToolkitException with	
		INVALID_TIMER_ID reason	

6.3.10.3.4 Test Coverage

CRR number	Test case number
N1	1

Annex A (normative): Class and Methods AID numbering and acronyms

A.1 Sim.access

Class Name	Acronyms	Numbering on 5 bits
SIMView	SVW	00001
SIMSystem	SSY	00010
SIMViewException	SVE	00011

A.1.1 SIMView methods

Method Name	Acronyms	Numbering on 6 bits
static final Constants		000001
<pre>short increase(byte[] incr, short incrOffset, byte[] resp, short respOffset)</pre>	INCR_BS_BS	000010
<pre>void invalidate()</pre>	INVL	000011
<pre>void readBinary(short fileOffset, byte[] resp, short respOffset, short respLength)</pre>	REDBS_BSS	000100
<pre>short readRecord(short recNumber, byte mode, short recOffset, byte[] resp, short respOffset, short respLength)</pre>	REDRSBS_BSS	000101
<pre>void rehabilitate()</pre>	REHA	000110
<pre>short seek(byte mode, byte[] patt, short pattOffset, short pattLength)</pre>	SEEKB_BSS	000111
<pre>void select(short fid)</pre>	SLCTS	001000
<pre>short select(short fid, byte[] fci, short fciOffset, short fciLength)</pre>	SLCTS_BSS	001001
<pre>short status(byte[] fci, short fciOffset, short fciLength)</pre>	STAT_BSS	001010
<pre>short updateBinary(short fileOffset, byte[] data, short dataOffset, short dataLength)</pre>	UPDBS_BSS	001011
<pre>void updateRecord(short recNumber, byte mode, short recOffset, byte[] data, short dataOffset, short dataLength)</pre>	UPDRSBS_BSS	001100

A.1.2 SIMSystem methods

Method Name	Acronyms	Numbering on 6 bits
static SIMView getTheSIMView()	GETS	000001

A.1.3 SIMViewException methods

Method Name	Acronyms	Numbering on 6 bits
static void throwIt(short reason)	THITS	000001
SIMViewException(short reason)	COORS	000010
Constants	CONS	000011

A.2 Sim.toolkit

Class Name	Acronyms	Numbering on 5 bits
ToolkitConstants	TKC	00001
ToolkitInterface	TKI	00010
EditHandler	EDH	00011
EnvelopeHandler	ENH	00100
EnvelopeResponseHandler	ERH	00101
MEProfile	MEP	00110
ProactiveHandler	PAH	00111
ProactiveResponseHandler	PRH	01000
ToolkitRegistry	TKR	01001
ViewHandler	VWH	01010
ToolkitException	TKE	01011

A.2.1 ToolkitConstants

Method Name	Acronyms	Numbering on 6 bits
Constants	CONS	000001

A.2.2 ToolkitInterface methods

Method Name	Acronyms	Numbering on 6 bits
<pre>void processToolkit (byte event)</pre>	PRTKB	000001

A.2.3 EditHandler methods

The numbering of the EditHandler methods it will be done in the classes inherit it: EnvelopeResponseHandler, ProactiveHandler, because the methods provided by this class as it is declared 'abstract'.

A.2.4 EnvelopeHandler methods

Method Name	Acronyms	Numbering on 6 bits
<pre>byte getEnvelopeTag()</pre>	GENT	000001
<pre>byte getItemIdentifier()</pre>	GIID	000010
short getSecuredDataLength()	GSDL	000011
<pre>short getSecuredDataOffset()</pre>	GSDO	000100
EnvelopeHandler getTheHandler()	GTHD	000101
short getTPUDLOffset()	GTPO	000110
Inherited Method Name: ViewHandler		
Byte compareValue(short valueOffset,byte[] compareBuffer, short compareOffset, short compareLength)	CPRVS_BSS	000111
Short copy(byte[] dstBuffer,short dstOffset,short dstLengt h)	COPY_BSS	001000
Short copyValue(short valueOffset, byte[] dstBuffer,short dstOffset,short dstLength)	CPYVS_BSS	001001
Byte findAndCompareValue(byte tag,byte[] compareBuffer,sh ort compareOffset)	FACRB_BS	001010
Byte findAndCompareValue(byte tag,byte occurence, short valueOffset,byte[] compareBuffer,short compare Offset,short compareLength)	FACRBBS_BSS	001011
Short FindAndCopyValue(byte tag,byte occurence,short value	FACYBBS_BSS	001100

Offset, byte[] dstBuffer, short dstOffset,		
short dstLength) Short	FACYB BS	001101
<pre>findAndCopyValue(byte tag,byte[] dstBuffer,short dst</pre>		661.161
Offset)		
Byte	FINDBB	001110
FindTLV(byte tag,byte occurrence)		
Short	GLEN	001111
GetLength()		
Byte	GVBYS	010000
<pre>GetValueByte(short valueOffset)</pre>		
Short	GVLE	010001
<pre>GetValueLength()</pre>		

A.2.5 EnvelopeResponseHandler methods

EnvelopeResponseHandler getTheHandler()	Method Name	Acronym	Numbering on 6 bits
Void post(byte statusType)	EnvelopeResponseHandler getTheHandler()		
Inherited Method Name: EditHandler	Void post(byte statusType)		
Void ppendArray(byte[] buffer, short offset, short APDA_BSS 000100 length, short datLength Void appendTLV(byte tag, byte[] value, short APTLB_BSS 000110 Void appendTLV(byte tag, byte value) APTLB_BSS 000110 Void appendTLV(byte tag, byte valuel, byte value2) APTLBBB 000111 Void appendTLV(byte tag, byte value1, byte value2) APTLBBB 000111 Void appendTLV(byte tag, byte value1, byte[] value2, short value20ffset, short value2Length) CLER 001000 Short value20ffset, short value2Length CLER CO1001 Inherited Method Name: ViewHandler Byte CPRVS_BSS 001010 Short compareOffset, short dstOffset, short dstLength COPY_BSS 001011 COPY_BSS 001011 Short COPY_BSS 001010 COPY_BSS 001100 COPY_BSS 001101 FACRB_BS 001101 FACRB_BS 001101 FACRB_BS 001101 CPYVS_BSS 001110 CPYVS_BSS 001111 CPYVS_BSS 00	Void postAsBERTLV(byte statusType, byte tag)		
Void ppendArray(byte[] buffer, short offset, short APDA_BSS 000100 length, short datLength Void appendTLV(byte tag, byte[] value, short APTLB_BSS 000110 Void appendTLV(byte tag, byte value) APTLB_BSS 000110 Void appendTLV(byte tag, byte valuel, byte value2) APTLBBB 000111 Void appendTLV(byte tag, byte value1, byte value2) APTLBBB 000111 Void appendTLV(byte tag, byte value1, byte[] value2, short value20ffset, short value2Length) CLER 001000 Short value20ffset, short value2Length CLER CO1001 Inherited Method Name: ViewHandler Byte CPRVS_BSS 001010 Short compareOffset, short dstOffset, short dstLength COPY_BSS 001011 COPY_BSS 001011 Short COPY_BSS 001010 COPY_BSS 001100 COPY_BSS 001101 FACRB_BS 001101 FACRB_BS 001101 FACRB_BS 001101 CPYVS_BSS 001110 CPYVS_BSS 001111 CPYVS_BSS 00			
length, short dstLength)	Inherited Method Name: EditHandler		
Void appendTLV(byte tag, byte value) Void appendTLV(byte tag, byte() value, short valueOffset, short valueLength) Void appendTLV(byte tag, byte value1, byte value2) Void appendTLV(byte tag, byte value1, byte value2) Void appendTLV(byte tag, byte value1, byte() value2, short value2Offset, short value2Length) Void clear() Inherited Method Name: ViewHandler Byte CompareValue(short valueOffset, byte() compareBuffer, short compareOffset, short dstOffset, short dstLength) Short Copy(byte() dstBuffer, short dstOffset, short dstLength) Byte FindAndCompareValue(byte tag, byte() compareBuffer, short valueOffset, byte() compareBuffer, short short valueOffset, byte() compareBuffer, short compareOffset) Byte findAndCompareValue(byte tag, byte occurence, short valueOffset, byte() compareBuffer, short valueOffset, byte() dstBuffer, short dstOffset, short FindAndCopyValue(byte tag, byte occurence, short value Offset, byte() dstBuffer, short dstOffset, short dstLength) Short FACYBBS_BSS O01110 FACYBBS_BSS O01111 FACYBBS_BSS O01111 FACYBBS_BSS O01111 FACYBBS_BSS O01111 FACYBBS_BSS O01000 FACYBBS_BSS O01011 GELEN O10000 FACYBBS_BSS O10001 FACYBBS_BSS O10001 FACYBBS_BSS O10001 FACYBBS_BSS O10001 FACYBBS_BSS O10001		APDA <u>BSS</u>	000100
Void appendTLV(byte tag, byte() value, short valueOffset, short valueLength) APTLB_BSS 000110 Void appendTLV(byte tag, byte value), byte value2, short value2Offset, short value2Length) APTLBBB 000111 Void appendTLV(byte tag, byte value1, byte() value2, short value2Offset, short value2Length) APTLBB_BSS 001000 Void clear() CLER 001001 Inherited Method Name: ViewHandler Byte CPRVS_BSS 001010 compareValue(short valueOffset, byte(] compareBuffer, short compareOffset, short dstOffset, short dstLength) COPY_BSS 001011 Short Copy(byte() dstBuffer, short dstOffset, short dstLength) CPYVS_BSS 001100 Short CopyValue(short valueOffset, byte() compareBuffer, short compareOffset) FACRB_BS 001101 Byte FindAndCompareValue(byte tag, byte occurence, short valueOffset, byte() compareBuffer, short compareOffset, short compareDuffer, short compareDuffer, short dstLength) FACYBBS_BSS 001111 Short FACYBBS_BSS 001111 FACYBBS_BSS 001111 Short FACYBBS_BSS 010000 FINDBB 010001 FindTIV(byte tag, byte occurrence) Short GLEN 010010		APTLBB	000101
Void appendTLV(byte tag, byte value1, byte() value2, short value20ffset, short value20ffset, short value22ength) APTLBBB 000111 Void appendTLV(byte tag, byte value1, byte() value2, short value20ffset, short value2Length) CLER 001000 Void clear() CLER 001001 Inherited Method Name: ViewHandler Byte CPRVS_BSS 001010 CompareValue(short value0ffset, byte() compareBuffer, short compareOffset, short dstOffset, short dstLength) COPY_BSS 001011 Short COPYWS_BSS 001100 001100 COPYWS_BSS 001101 COPYWS_BSS 001100 COPY_BSS 001101 COPYWS_BSS 001100 COPY_BSS 001101 FACRB_BS 001100 Byte () dstBuffer, short dstOffset, short dstOffset, short compareOffset, short compareDuffer, short compareOffset, short compareDuffer, short compareDuffer, short compareDuffer, short compareDuffer, short compareDuffer, short dstOffset, short compareDuffer, short dstOffset, short dstOffset, short compareDuffer, short dstOffset, short compareDuffer, short dstOffset, short compareDuffer, short dstOffset, short compareDuffer, short dstOffset, shor			
Void appendTLV(byte tag, byte value1, byte[] value2, short value2Offset, short value2Length) CLER		APTI RRR	000111
Short value20ffset, short value2Length) CLER			
Inherited Method Name: ViewHandler		AL LEBB_B33	001000
Byte compareValue(short valueOffset,byte[] compareBuffer, short compareOffset, short compareLength) Short Copy(byte[] dstBuffer,short dstOffset,short dstLengt h) Short Copy(byte[] dstBuffer,short dstOffset,short dstLengt h) Short CopyValue(short valueOffset, byte[] dstBuffer,short dstOffset,short dstLength) Byte FindAndCompareValue(byte tag,byte[] compareBuffer,short compareOffset) Byte findAndCompareValue(byte tag,byte occurence, short valueOffset,byte[] compareBuffer,short compareOffset,short compareLength) Short FindAndCopyValue(byte tag,byte occurence,short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength) Short findAndCopyValue(byte tag,byte] dstBuffer,short dst Offset, byte[] dstBuffer, short dst Offset, byte[] dstBuffer, short dst Offset) FACYBBS BSS O10000 FACYBBS BSS O10000 FACYBBS BSS O10000 FACYBBS DSS O10000 FACYBBS O10000 FACYBBS O10000 FACYB BS O10000 FACYB BS O10001 FACYB BS O10011 FACYB BS O10011		CLER	001001
Byte compareValue(short valueOffset,byte[] compareBuffer, short compareOffset, short compareLength) Short Copy(byte[] dstBuffer,short dstOffset,short dstLengt h) Short CopyValue(short valueOffset, byte[] compareBuffer, short dstBuffer,short dstOffset, short dstLength) Byte CopyValue(short valueOffset, byte[] compareBuffer,short compareOffset) Byte findAndCompareValue(byte tag,byte] compareBuffer,short valueOffset,byte[] compareBuffer,short valueOffset,byte[] compareBuffer,short compareOffset,bort compareLength) Short short compareLength Short dstLength) Short findAndCopyValue(byte tag,byte occurence,short valueOffset, byte[] dstBuffer,short dstOffset, byte[] dstBuffer,sh			
compareValue(short valueOffset, byte[] compareBuffer, short compareOffset, short compareLength) Short Copy(byte[] dstBuffer, short dstOffset, short dstLength) Short CopyValue(short valueOffset, short dstLength) Byte FindAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset) Byte findAndCompareValue(byte tag, byte occurence, short valueOffset, byte[] dstBuffer, short compareOffset, short compareOffset, short compareOffset, short valueOffset, short compareOffset, short compareLength) Short FindAndCopyValue(byte tag, byte occurence, short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength) Short FACYBBS_BSS O11110 FACYBBS_BSS O011111 FACYBBS_BSS O11011 FACYBBS_BSS O10000 FACYBBS_BSS O10000 GLEN O10010 GetLength() Byte GVBYS O10011 GVLE O10100	Inherited Method Name: ViewHandler		
compareValue(short valueOffset, byte[] compareBuffer, short compareOffset, short compareLength) Short Copy(byte[] dstBuffer, short dstOffset, short dstLength) Short CopyValue(short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength) Byte FindAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset) Byte findAndCompareValue(byte tag, byte occurence, short valueOffset, byte[] compareBuffer, short compareOffset, short compareOffset, short compareOffset, short compareOffset, short compareLength) Short FindAndCopyValue(byte tag, byte occurence, short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength) Short FACYBBS_BSS O01110 FACYBBS_BSS O01111 FACYBBS_BSS O01111 FACYBBS_BSS O01111 FACYBBS_BSS O01000 FACYBBS_BSS O10000 GindAndCopyValue(byte tag, byte[] dstBuffer, short dst Offset) Byte FACYB_BS O10000 GLEN O10010 GetLength() Byte GVBYS O10011	Byte	CPRVS BSS	001010
Short Copy(byte[] dstBuffer, short dstOffset, short dstLengt h) Short CopyValue(short valueOffset, byte[] dstBuffer, short dstLength) Byte FindAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset, byte[] compareBuffer, short valueOffset, byte[] compareBuffer, short valueOffset, byte[] compareBuffer, short valueOffset, byte[] compareBuffer, short compareOffset) Byte findAndCompareValue(byte tag, byte occurence, short valueOffset, byte[] compareBuffer, short compareOffset, byte[] dstBuffer, short compareOffset, byte[] dstBuffer, short valueOffset, byte[] dstBuffer, short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength) Short FACYBBS_BSS O01111 FACYBBS_BSS O01111 FACYBBS_BSS O01111 FACYBBS_BSS O110000 FACYB_BS O10000 FINDBB O10001 GetLength() Byte GVBYS O10011 GVLE O10100			
Copy(byte[] dstBuffer, short dstOffset, short dstLength) Short CopyValue(short valueOffset, byte[] dstBuffer, short dstLength) Byte FindAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset) Byte findAndCompareValue(byte tag, byte occurence, short valueOffset, byte[] compareBuffer, short compareOffset) Short FindAndCopyValue(byte tag, byte occurence, short valueOffset, short compareLength) Short FindAndCopyValue(byte tag, byte occurence, short value Offset, byte[] dstBuffer, short dstOffset, short dstLength) Short findAndCopyValue(byte tag, byte occurence, short value Offset, byte[] dstBuffer, short dst Offset) Byte FINDBB O10000 FINDBB O10001 GetLength() Byte GetValueByte(short valueOffset) Short GetValueByte(short valueOffset) GVLE O10100			
h) Short CopyValue(short valueOffset, byte[] dstBuffer, short dstLength) Byte FindAndCompareValue(byte tag,byte[] compareBuffer, sh ort compareOffset) Byte findAndCompareValue(byte tag,byte occurence, short valueOffset, byte[] compareBuffer, short compareOffset, short compareLength) Short FindAndCopyValue(byte tag,byte occurence, short value Offset, byte[] dstBuffer, short dstOffset, short dstLength) Short Short Short FACYBBS_BSS O01110 FACRBBS_BSS O01110 FACYBBS_BSS O01111 FACYBBS_BSS O01111 FACYBBS_BSS O10000 FACYBBS_BSS O10000 FACYBBS_BSS O10000 FACYBBS_BSS O10000 GetLength() Byte GLEN GLEN O10010 GetLength() Byte GetValueByte(short valueOffset) Short GetValueByte(short valueOffset) Short GVLE O10100		COPY_BSS	001011
Short CopyValue(short valueOffset, byte[] dstBuffer,short dstOffset,short dstLength) Byte FindAndCompareValue(byte tag,byte[] compareBuffer,sh ort compareOffset) Byte findAndCompareValue(byte tag,byte occurence, short valueOffset,byte[] compareBuffer,short compare Offset,short compareLength) Short FindAndCopyValue(byte tag,byte occurence, short value Offset, byte[] dstBuffer, short dstOffset, short dstLength) Short FACYBBS_BSS O01110 FACRBBS_BSS O01111 FACYBBS_BSS O01111 FACYBBS_BSS O10000 FACYBBS_BSS O10000 FACYBBS_BSS O10000 GELEN O10001 GELEN O10010 GUEN GVBYS O10011 GUEN O10011	, , , , , , , , , , , , , , , , , , , ,		
CopyValue(short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength) Byte FindAndCompareValue(byte tag,byte[] compareBuffer, short compareOffset) Byte findAndCompareValue(byte tag,byte occurence, short valueOffset, byte[] compareBuffer, short compareOffset, short compareLength) Short FindAndCopyValue(byte tag,byte occurence, short value Offset, byte[] dstBuffer, short dstOffset, short dstLength) Short FindAndCopyValue(byte tag,byte occurence, short value Offset, byte[] dstBuffer, short dstOffset, short dstLength) Short FACYBBS FACYBBS O10000 FACYBBS O10000 FACYBBS O10000 FACYBBS O10000 FACYBBS O10000 FACYBBS O10001 FACYBBS O10000	,	CDVI/S BSS	001100
Byte FindAndCompareValue(byte tag,byte[] compareBuffer,sh ort compareOffset) Byte findAndCompareValue(byte tag,byte occurence, short valueOffset,byte[] compareBuffer,short compareOffset,short compareLength) Short FindAndCopyValue(byte tag,byte occurence, short value Offset, byte[] dstBuffer, short dstOffset, short dstLength) Short FindAndCopyValue(byte tag,byte occurence,short value Offset, byte[] dstBuffer, short dstOffset, short dstLength) Short FindAndCopyValue(byte tag,byte[] dstBuffer,short dst Offset) Short FindAndCopyValue(byte tag,byte[] dstBuffer,short dst Offset) Short GLEN O10001 Short GLEN O10010 GetValueByte(short valueOffset) Short GVBYS O10011	~~~~~	CF1V3_B33	001100
FindAndCompareValue(byte tag,byte[] compareBuffer,sh ort compareOffset) Byte findAndCompareValue(byte tag,byte occurence, short valueOffset,byte[] compareBuffer,short compareOffset,short datOffset,short dstUpte tag,byte occurence,short valueOffset, short dstLength) Short Short FACYBBS_BSS O11111 FACYB_BS O10000 FACYB_BS O10000 FINDBB O10001 FINDBB O10001 GLEN O10010 GLEN O10011 GVBYS O10011 Short GVBYS O10010			
FindAndCompareValue(byte tag,byte[] compareBuffer,sh ort compareOffset) Byte findAndCompareValue(byte tag,byte occurence, short valueOffset,byte[] compareBuffer,short compareOffset,short compareOffset,short compareOffset,short compareLength) Short FindAndCopyValue(byte tag,byte occurence,short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength) Short Short FACYBBS_BSS O01111 FACYBBS_BSS O10000 FACYB_BS O10000 FACYB_BS O10000 FINDBB O10001 FINDBB O10001 GetLength() Byte GetValueByte(short valueOffset) Short GVEE O10010			
Byte findAndCompareValue(byte tag,byte occurence, short valueOffset,byte[] compareBuffer,short compare Offset,short compareLength) Short FindAndCopyValue(byte tag,byte occurence,short value Offset, byte[] dstBuffer, short dstOffset, short dstLength) Short FindAndCopyValue(byte tag,byte[] dstBuffer,short dst Offset) Byte FindTLV(byte tag,byte occurence) Short GetLength() Byte GetValueByte(short valueOffset) Short GVBYS O01111 FACYBBS_BSS O010111 FACYB_BS O10000 FINDBB O10000 GLEN O10010 GVBYS O10011		FACRB_BS	001101
Byte findAndCompareValue(byte tag,byte occurence, short valueOffset,byte[] compareBuffer,short compare Offset,short compareLength) Short FindAndCopyValue(byte tag,byte occurence,short value Offset, byte[] dstBuffer, short dstOffset, short dstLength) Short FACYBBS_BSS O01111 FACYBBS_BSS O01111 FACYBBS_BSS O010000 FACYBBS_BSS O100000 FACYBBS_BSS O100000 FACYBBS_BSS O100000 FINDBB O10001 FINDBB O10001 GetLength() Byte GetValueByte(short valueOffset) Short GVBYS O10011			
short valueOffset,byte[] compareBuffer,short compare Offset,short compareLength) Short FindAndCopyValue(byte tag,byte occurence,short value Offset, byte[] dstBuffer, short dstOffset, short dstLength) Short FACYBBS_BSS 001111 FACYBBS_BSS 010000 FACYBBS_BSS 010000 FACYB_BS 010000 FACYB_BS 010000 FINDBB 010001 FINDBB O10001 FINDBB O10010 GetLength() Byte GVBYS O10011 GetValueByte(short valueOffset) Short GVLE 010100	ort compareOffset)		
short valueOffset,byte[] compareBuffer,short compare Offset,short compareLength) Short FindAndCopyValue(byte tag,byte occurence,short value Offset, byte[] dstBuffer, short dstOffset, short dstLength) Short FACYBBS_BSS 001111 FACYBBS_BSS 010000 FACYBBS_BSS 010000 FACYB_BS 010000 FACYB_BS 010000 FINDBB 010001 FINDBB O10001 FINDBB O10010 GetLength() Byte GVBYS O10011 GetValueByte(short valueOffset) Short GVLE 010100	Byte findAndCompareValue(byte tag.byte occurence.	FACRERS BSS	001110
Short FindAndCopyValue(byte tag,byte occurence,short value Offset, byte[] dstBuffer, short dstOffset, short dstLength) Short findAndCopyValue(byte tag,byte[] dstBuffer,short dst Offset) Byte FindTLV(byte tag,byte occurrence) Short GetLength() Byte GetValueByte(short valueOffset) Short GetValueByte(short valueOffset) Short GVLE O01111 FACYBBS_BSS O010000 FACYB_BS O10000 FACYB_		TACKBBC_BCC	001110
FindAndCopyValue(byte tag,byte occurence,short value Offset, byte[] dstBuffer, short dstOffset, short dstLength) Short FACYB_BS 010000 findAndCopyValue(byte tag,byte[] dstBuffer,short dst Offset) Byte FINDBB 010001 FINDTLV(byte tag,byte occurrence) Short GLEN 010010 GetLength() Byte GVBYS 010011 GetValueByte(short valueOffset) Short GVLE 010100	Offset, short compareLength)		
Offset, byte[] dstBuffer, short dstOffset, short dstLength) Short findAndCopyValue(byte tag,byte[] dstBuffer,short dst Offset) Byte FindTLV(byte tag,byte occurrence) Short GetLength() Byte GetValueByte(short valueOffset) Short GVEE O10010		FACYBBS_BSS	001111
short dstLength) Short findAndCopyValue(byte tag,byte[] dstBuffer,short dst Offset) Byte FindTLV(byte tag,byte occurrence) Short GetLength() Byte GetValueByte(short valueOffset) Short GVEE Short GVEE O10010			
Short findAndCopyValue(byte tag,byte[] dstBuffer,short dst Offset) Byte FindTLV(byte tag,byte occurrence) Short GetLength() Byte GetValueByte(short valueOffset) Short GVLE GVLE O10000 FACYB_BS O10000 FINDBB O10001 FINDBB O10001 GLEN O10010 GVLE O10010	· -		
findAndCopyValue(byte tag,byte[] dstBuffer,short dst Offset) Byte FINDBB O10001 FindTLV(byte tag,byte occurrence) Short GetLength() Byte GVBYS O10011 GetValueByte(short valueOffset) Short GVLE O10100		EACVE DO	010000
Offset) Byte FINDBB 010001 FindTLV(byte tag,byte occurrence) GLEN 010010 Short GVBYS 010011 GetValueByte(short valueOffset) GVLE 010100		FACTB_B3	010000
FindTLV(byte tag,byte occurrence) Short			
Short GLEN 010010 GetLength() GVBYS 010011 GetValueByte(short valueOffset) GVLE 010100	Byte	FINDBB	010001
GetLength() GVBYS 010011 Byte GVBYS 010011 GetValueByte(short valueOffset) GVLE 010100			
Byte GVBYS 010011		GLEN	010010
GetValueByte(short valueOffset) Short GVLE 010100	3 17	0) (5) (6	0.100.11
Short GVLE 010100	1 -	GVBYS	010011
OVEL 010100		G\/I E	010100
OCC VALACIICII CII /	GetValueLength()	GVLE	010100

A.2.6 MEProfile methods

Method Name	Acronym	Numbering on 6 bits
Sstatic boolean check(byte index)	CHECB	000001
Sstatic boolean check(byte[] mask, short offset,	CHECBSS	000010
short length)		
<pre>static boolean check(short index)</pre>	CHECS	000011
static short copy(short startOffset,	COPYS BSS	000100
<pre>byte[] dstBuffer, short dstOffset, short dstLength)</pre>		
static short getValue(short indexMSB, short indexLSB)	GVALSS	000101

A.2.7 ProactiveHandler methods

Method Name	Acronyms	Numbering on 6 bits
GetTheHandler()	GTHD	000001
Init(byte type, byte qualifier, byte dstDevice)	INITBBB	000010
<pre>InitDisplayText(byte qualifier, byte dcs, byte[]</pre>	INDTBB_BSS	000011
buffer, short offset, short length)	1140100_000	000011
<pre>InitGetInkey(byte qualifier, byte dcs, byte[] buffer,</pre>	INGKBB_BSS	000100
short offset, short length)		333.33
<pre>InitGetInput(byte qualifier, byte dcs, byte[] buffer,</pre>	INGPBB_BSSSS	000101
short offset, short length, short minRespLength,	_	
short maxRespLength)		
Byte send()	SEND	000110
Inherited Method Name: EditHandler		
Void appendArray(byte[] buffer, short offset, short	APDA_BSS	000111
length, short dstLength)	<u> </u>	
Void appendTLV(byte tag, byte value)	APTLBB	001000
Void appendTLV(byte tag, byte[] value, short	APTLB_BSS	001001
valueOffset, short valueLength)		
Void appendTLV(byte tag, byte value1, byte value2)	APTLBBB	001010
Void appendTLV(byte tag, byte value1, byte[] value2,	APTLBB_BSS	001011
short value2Offset, short value2Length)		
Void clear()	CLER	001100
Inherited Method Name: ViewHandler		
Byte	CPRVS_BSS	001101
CompareValue(short valueOffset,byte[] compareBuffer,s	_	
hort compareOffset, short compareLength)		
Short	COPY_BSS	001110
Copy(byte[] dstBuffer,short dstOffset,short dstLength		
Short	CPYVS_BSS	001111
CopyValue(short valueOffset,	CP1V3_B33	001111
byte[] dstBuffer,short dstOffset,short dstLength)		
Byte	FACRB_BS	010000
FindAndCompareValue(byte tag,byte[] compareBuffer,sho		
rt compareOffset)		
Byte findAndCompareValue(byte tag,byte occurence,	FACRBBS_BSS	010001
short valueOffset,byte[] compareBuffer,short compareO		
ffset,short compareLength) Short	FACYBBS_BSS	010010
FindAndCopyValue(byte tag,byte occurence,short value0	FACTODS_DSS	010010
ffset, byte[] dstBuffer, short dstOffset,		
short dstLength)		
Short	FACYB BS	010011
<pre>findAndCopyValue(byte tag,byte[] dstBuffer,short dst0</pre>		
ffset)		
Byte	FINDBB	010100
FindTLV(byte tag,byte occurrence)		
Short	GLEN	010101
GetLength()	0)/(5)/(0	040440
Byte GetValueByte(short valueOffset)	GVBYS	010110
Short.	GVLE	010111
GetValueLength()	GVLE	010111
		1

A.2.8 ProactiveResponseHandler methods

Method Name	Acronyms	Numbering on 6 bits
Short CopyAdditionalInformation(byte[] dstBuffer,	CPAI BSS	000001
short dstOffset, short dstLength)	_	
Short copyTextString(byte[] dstBuffer, short	CPTS_BS	000010
dstOffset)		
Short getAdditionalInformationLength()	GTIL	000011
Byte getGeneralResult()	GTGR	000100
Byte getItemIdentifier()	GTII	000101
Byte getTextStringCodingScheme()	GTCS	000110
Short getTextStringLength()	GTTL	000111
GetTheHandler()	GTHD	001000
Inherited Method Name: ViewHandler		
Byte	CPRVS_BSS	001001
CompareValue(short valueOffset,byte[] compareBuffer,s		
hort compareOffset, short compareLength)		
Short	COPY_BSS	001010
Copy(byte[] dstBuffer,short dstOffset,short dstLength		
	00000	004044
Short CopyValue(short valueOffset,	CPYVS_BSS	001011
byte[] dstBuffer,short dstOffset,short dstLength)		
by ce[] abebuiler, shore abcorrace, shore abeliengen,		
Byte	FACRB_BS	001100
FindAndCompareValue(byte tag,byte[] compareBuffer,sho	THORE_BO	001100
rt compareOffset)		
Byte findAndCompareValue(byte tag,byte occurence,	FACRBBS_BSS	001101
<pre>short valueOffset,byte[] compareBuffer,short compareO ffset,short compareLength)</pre>		
Short compareLength)	FACYBBS BSS	001110
FindAndCopyValue(byte tag,byte occurence,short value0	FACTODS_DSS	001110
ffset, byte[] dstBuffer, short dstOffset,		
short dstLength)		
Short	FACYB_BS	001111
<pre>findAndCopyValue(byte tag,byte[] dstBuffer,short dst0</pre>		
ffset)		
Byte	FINDBB	010000
FindTLV(byte tag,byte occurrence)		
Short	GLEN	010001
GetLength()	O) (D) (O	040040
Byte GetValueByte(short valueOffset)	GVBYS	010010
Short	GVLE	010011
DIOLC	GVLE	010011

A.2.9 ToolkitRegistry methods

Method Name	Acronyms	Numbering on 6 bits
AllocateTimer()	ATIM	000001
changeMenuEntry(byte id, byte[] menuEntry, short	CMETB_BSSBZBS	000010
offset, short length, byte nextAction, boolean		
helpSupported, byte iconQualifier, short		
iconIdentifier)		
<pre>clearEvent(byte event)</pre>	CEVTB	000011
disableMenuEntry(byte id)	DMETB	000100
enableMenuEntry(byte id)	EMETB	000101
<pre>getEntry()</pre>	GETY	000110
<pre>getPollInterval()</pre>	GPOL	000111
<pre>initMenuEntry(byte[] menuEntry, short offset, short</pre>	IMET_BSSBZBS	001000
length, byte nextAction, boolean helpSupported, byte		
<pre>iconQualifier, short iconIdentifier)</pre>		
<pre>isEventSet(byte event)</pre>	IEVSB	001001
releaseTimer(byte timerIdentifier)	RTIM	001010
requestPollInterval(short duration)	RPOL	001011
setEvent(byte event)	SEVTB	001100
setEventList(byte[] eventList, short offset, short	SEVL_BSS	001101
length)		

A.2.10 ViewHandler methods

The numbering of the ViewHandler methods it will be done in the classes inherit it: EditHandler, EnvelopeHandler, ProactiveResponseHandler, ProactiveHandler, because the methods provided by this class as it is declared 'abstract'.

A.2.11 ToolkitException methods

Method Name	Acronyms	Numbering on 6 bits
Static void throwIt(short reason)	THITS	000001
ToolkitException(short reason)	COORS	000010
Constants	CONS	000011

Annex B (normative): Script file syntax and format description

B.1 Syntax description

```
Following is a syntax description in BNF.
<statement list> ::=
                                                                  [ <statement> \n] +
                                                             <simple> | <switch> | <blank line>
<statement> ::=
                                                             <reset> | <init> | <command> | <remark>
<simple> ::=
<reset> ::=
<init> ::=
                                                            INI < hexdata>
<command> ::=
                                                            CMD < hexdata > [ < response > ] ( < status > )
<response> ::=
                                                             [ < hexdata > ]
<status> ::=
                                                             ( < hexdata > )
<remark> ::=
                                                            REM < text line>
<switch> ::=
                                                            SWI { [<|abelled list>] + }
<labelled list> ::= <label> : \n <statement list>
Description of syntax metalanguage:
                                          represents a linebreak
\n
[x]
                                          means x can appear optionally
[x] +
                                          means 1 or more appearances of x
x \mid y
                                          means x or y
[]{}:
                                          (bold) these are characters that appear literally in the script files
<text line> any character until the end of the line
<br/>

<hexdata> data written in hexadecimal, each byte separated from the following by a
whitespace
```

Each simple statement beginning with 3 characters different than the ones defined indicates another tool command, and shall be ignored by the parser if not recognised.

```
' ', '\t' : Can be used as separator
```

A long statement can be broken into several lines by using the character '\' at the end of each line which is not the last one in the statement.

For more details refer to the examples in B.3.

B.2 Semantics

Following is the meaning of each of the statements:

Sends an APDU Command to the card, including (optionally) the expected response data and also (optionally) the expected status words SW1, SW2.

RST: Resets and powers on the card

INI: Performs the terminal profile with the following data. Afterwards, it shall perform all the fetch and terminal response commands until there is no proactive session in progress.

REM: Used for comments

SWI: Activates a switch condition. Every labelled list represents a list of statements to be executed, if the label matches the SW resulting from the previously executed command.

Evaluation of expected response and status in the case of a CMD:

<response> data within [...] has to be checked, it needs to be present for an outgoing command.

Bytes written as XX shall not be checked by the APDU tool.

status contained within (...) has to be checked; when several status are valid they shall be separated by commas. Bytes Nibble written as XX shall not be checked by the APDU tool.

B.3 Example

<status>

```
REM this is an example
REM Case 1 example
CMD A0 C2 00 00 00 (91 33 , 69 XX)
REM Case 2 example
CMD A0 B6 00 00 07 \
    [XX XX XX 55 55 XX 55] \
    (91 33 , 67 XX)
CMD A0 B6 00 00 07 \
    (91 33 , 67 XX)
CMD A0 C0 00 00 1F \
    [10 A0 00 00 00 09 00 02 FF FF FF FF 89 28 A4 05 \
    (90 00)
REM Case 3 example
CMD A0 C2 00 00 33 \
    D1 31 82 02 83 81 06 05 80 11 22 33 44 8B 24 40 \
    08 00 24 23 85 18 41 04 51 10 10 00 00 00 00 13 \
    02 70 00 00 0E 0D 00 00 00 00 28 A4 05 00 00 00 \
    00 00 00 \
    (90 00)
REM Case 4 example with switch statement
CMD 00 A4 04 00 10 \
   A0 00 00 00 09 00 02 FF FF FF FF 89 41 04 44 02 \backslash
    (61 XX, 6A 82)
SWI {
61 XX:
CMD 00 C0 00 00 14 \
    [10 A0 00 00 00 09 00 02 FF FF FF FF 89 41 04 44 \
    02 02 CC CC] \
    (90 00)
CMD A0 A4 00 00 02 \
    3F 00
6A 82:
RST
REM Case 5 example
CMD A0 C2 00 00 33
    D1 31 82 02 83 81 06 05 80 11 22 33 44 8B 24 40 \
08 00 24 23 85 18 41 04 51 10 10 00 00 00 00 13 \
    02 70 00 00 0E 0D 00 00 00 00 28 A4 05 00 00 00 \setminus
    00 00 00 \
    (6X 00)
```

B.4 Style and formatting

In order to show a common appearance all the scripts shall follow those format rules:

- start always with a 'RST' followed by an 'INI' command.
- The command, data to be checked and status to be checked shall be presented in the following order:

CMD COMMAND [EXPECTED DATA] (EXPECTED STATUS)

- APDU shall be presented with command (CLA INS P1 P2 P3) in one line and data (if present) in next line grouped 16 bytes per line (see example above).
- The expected data (if present) shall be presented in 16 bytes groups per line (see example above).

Annex C (normative): Default Prepersonalisation

C.1 General Default Prepersonalisation

This table shows the default prepersonalisation, the file system and the files' content, that the test SIM cards shall contain unless otherwise stated.

Name	Identifier	Default Value	Special Features
EFICCID	2FE2	OF FF FF FF FF FF FF FF	This value is not compliant with GSM 11.11
EFIMSI	6F07	FF FF FF FF FF FF FF	This value is not compliant with GSM 11.11
EFLP	6F05	01 FF FF FF	•
EF _{Kc}	6F20	FF FF FF FF FF FF FF 07	
EF _{PLMNsel}	6F30	FF	
. 2.11.1001		FF	
EF _{HPLMN}	6F31	05	
EF _{ACMmax}	6F37	00 00 00	Access condition UPDATE: CHV1
EF _{SST}	6F38	FF 3F C3 <u>OF03</u> OC 00 FF OF 00 33	
EF _{ACM}	6F39	00 00 00	Access condition UPDATE: CHV1
EF _{PUCT}	6F41	FF FF FF 00 00	Access condition UPDATE: CHV1
EF _{BCCH}	6F74	FF	
		FF FF FF FF	
EFACC	6F78	00 00	
EF _{FPLMN}	6F7B	FF FF FF FF FF FF FF FF FF	
EFLOCI	6F7E	FF FF FF FF 00 F0 00 00 00 FF 01	
EF _{AD}	6FAD	00 FF FF	
EF _{Phase}	6FAE	03	
EF _{FDN}	6F3B	Default value in all the records:	Records: 5
		FF	
		FF FF FF FF	
EF _{SMSP}	6F42	FF	Records: 1
L. SWOF	0	FF	Troopido. 1
		FF	
		FF FF FF FF FF	
EF _{LND}	6F44	FF	Records: 1
		FF FF FF FF	
EF _{SMSS}	6F43	FF FF	
EF _{SMS}	6F3C	1st record: 00 FF FF(length 176)	Records: 3
LI SIVIS	01 00	2 nd record:00 FF FF(length 176)	Troopido. o
		3 rd record: 00 FF FF(length 176)	
EF _{ADN}	6F3A	FF	Records: 1
		FF	
EFCCP	6F3D	FF	
EFCCP	0F3D	FF FF	
EF _{MSISDN}	6F40	FF	Records: 1
_ MICIODIA		FF	
		FF FF FF FF	
EF _{SDN}	6F49	FF	Records: 1
		FF	
EF _{SUME}	6F54	85 OC 54 4F 4F 4C 4B 49 54 20 54 45	
LISUME	01:54	53 54 FF FF FF FF	
EF _{CBMI}	6F45	FF FF	
EF _{CBMID}	6F48	10 80	
EF _{CBMIR}	6F50	10 80 10 9F	
EF _{IM}	4F20	FF FF FF FF FF FF FF FF FF	
- i livi	11 20	<u> </u>	<u> </u>

The default value for the CHV1 shall be "0x31 0x31 0x31 0x31 0xFF 0xFF 0xFF 0xFF 0xFF" and its state shall be 'disabled' during test applets execution.

C.2 Sim.Access.SimView test default prepersonalisation

C.2.1 DF_{SIMTEST} (SIM Test)

Identifier: '0319'

C.2.2 EF_{TNR} (Transparent Never Read)

	Identifier: '6F01'	Structure: transparent		Mandatory	
	File size: 3 bytes		Update activity: low		
		Access Conditi	ons:		
	READ)	NEVER		
	UPDATE		ALWAYS		
	INVALI	IDATE	ALWAYS		
	REHA	BILITATE	ALWAYS		
Bytes	Description		Default Value	M/O	Length
1 – 3	Test Data	AA AA AA		М	3 bytes

C.2.3 EF_{TNU} (Transparent Never Update)

	Identifier: '6F02'		Structure: transparent		indatory
	File size: 3 bytes	File size: 3 bytes		Update activity: low	
		Access Conditi	ions:		
	READ		ALWAYS		
	UPDA	TE	NEVER		
	INVALI	DATE	ALWAYS		
	REHAE	BILITATE	ALWAYS		
Bytes	Description		Default Value	M/O	Length
1 - 3	Test Data		55 55 55	М	3 bytes

C.2.4 EF_{TARU} (Transparent Always Read and Update)

	Identifier: '6F03' St		ucture: transparent	Ма	ndatory
	File size: 260 bytes	Update activit	y: low		
Access Conditions:					
	READ		ALWAYS		
	UPDATE		ALWAYS		
	INVALI	DATE	ALWAYS		
	REHAB	ILITATE	ALWAYS		
Bytes	Description		Default Value	M/O	Length
1 - 260	Test Data		FF FF	М	260
					bytes

C.2.5 EF_{CNR} (Cyclic Never Read)

Identifier: '6F04'			Structure: cyclic		Mandatory		
R	Record length: 3 bytes		Update activity: high				
	Access Conditions:						
	READ		NEVER	3			
	UPDATE		ALWAY	S			
	INCREAS	E	ALWAYS				
	INVALIDA	TE	ALWAYS				
	REHABILI	TATE	ALWAY	S			
Logical Record Number	Description		Default Value	M/O	Length		
1	Test Data		00 00 00	М	3 bytes		
2	Test Data		00 00 00	М	3 bytes		

C.2.6 EF_{CNU} (Cyclic Never Update)

Identifier: '6F05'			Structure: cyclic		Mandatory		
R	Record length: 3 bytes		Update activity: high				
	Access Conditions:						
READ ALWAYS UPDATE NEVER INCREASE NEVER INVALIDATE ALWAYS REHABILITATE ALWAYS							
Logical Record Number	Description		Default Value	M/O	Length		
1	Test Data		00 00 00	М	3 bytes		
2	Test Data		00 00 00	М	3 bytes		

C.2.7 EF_{CNIC} (Cyclic Never Increase)

Identifier: '6F06			Structure: cyclic		Mandatory
R	ecord length: 3 bytes		Update activity: high		
Access Conditions: READ ALWAYS UPDATE ALWAYS INCREASE NEVER INVALIDATE ALWAYS REHABILITATE ALWAYS					
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data		00 00 00	М	3 bytes
2	Test Data		00 00 00	М	3 bytes

C.2.8 EF_{CNIV} (Cyclic Never Invalidate)

Iden	Identifier: '6F07		Structure: cyclic		Mandatory		
R	Record length: 3 bytes		Update	activity:	high		
	Access Conditions:						
	READ		ALWAY	′S			
	UPDATE		ALWAY	′S			
	INCREASI	Ē	ALWAY	′S			
	INVALIDA		NEVE	-			
	REHABILI	TATE	ALWA	′S			
Logical Record	Description		Default Value	M/O	Length		
Number							
1	Test Data		00 00 00	М	3 bytes		
2	Test Data		00 00 00	М	3 bytes		

C.2.9 EF_{CNRH} (Cyclic Never Rehabilitate)

lden	Identifier: '6F08'		Structure: cyclic				
R	ecord length: 3 bytes	Upda	Update activity: high				
	Access Conditions:						
	READ ALWAYS						
	UPDATE	ALWA	YS				
	INCREASE	ALWA	ALWAYS				
	INVALIDATE	ALWAYS					
	REHABILITA	TE NEVE	R				
Logical	Description	Default Value	M/O	Length			
Record							
Number							
1	Test Data	00 00 00	М	3 bytes			
2	Test Data	00 00 00	М	3 bytes			

C.2.10 EF_{CARU} (Cyclic Always Read and Update)

	• •	-	-	•			
Iden	Identifier: '6F09'		Structure: cyclic		Mandatory		
R	ecord length: 3 bytes		Update	activity	: high		
	Access Conditions:						
	READ	100000 001	ALWAY	2			
		_		_			
	UPDAT	E	ALWAY	S			
	INCREA	ASE	ALWAY	S			
	INVALI	DATE	ALWAY	S			
	REHAB	ILITATE	ALWAY	S			
Logical	Description		Default Value	M/O	Length		
Record	•						
Number							
	Toot Data		EE EE EE	М	2 hydaa		
1	Test Data		55 55 55	IVI	3 bytes		
2	Test Data		AA AA AA	M	3 bytes		

C.2.11 EF_{LNR} (Linear Fixed Never Read)

Identifier: '6F0A'		Str	Structure: linear fixed		ndatory	
	Record length: 4 bytes		Update activity: low			
	Access Conditions:					
	READ		NEVER			
	UPDATE	<u> </u>	ALWAYS			
	INVALID	ATE	ALWAYS			
	REHABI	LITATE	ALWAYS			
Logical	Description		Default Value	M/O	Length	
Record						
Number						
1	Test Data - Record 1		FF FF FF FF	М	4 bytes	
2	Test Data - Record 2		FF FF FF FF	М	4 bytes	

C.2.12 EF_{LNU} (Linear Fixed Never Update)

	Identifier: '6F0B'	Str	ructure: linear fixed	Mai	ndatory
Record length: 4 bytes			Update activity: low		
	A	Access Cond	litions:		
	READ UPDAT INVALIF		ALWAYS NEVER ALWAYS		
	REHABI	LITATE	ALWAYS		
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data - Record 1		FF FF FF FF	М	4 bytes
2	Test Data - Record 2		FF FF FF FF	М	4 bytes

C.2.13 EF_{LARU} (Linear Fixed Always Read and Update)

	Identifier: '6F0C'	Str	ructure: linear fixed	Mai	ndatory
	Record length: 4 bytes		Update activity: low		
	ļ	Access Cond	litions:		
	READ UPDATI INVALIE REHABI	E DATE	ALWAYS ALWAYS ALWAYS ALWAYS		
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data - Record 1		55 55 55 55	М	4 bytes
2	Test Data - Record 2		AA AA AA	М	4 bytes

C.2.14 EF_{CINA} (Cyclic Increase Not Allowed)

Identifier: '6F0D'		Structure: cyclic Manda		datory		
Record length: 3 bytes			Update activity: high			
Access Conditions:						
	READ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ALWAYS			
	UPDATE		ALWAYS			
	INCREASE		ALWAYS (see note 1)			
	INVALIDA	ATE	ALWAYS			
	REHABIL	ITATE	ALWAYS			
Logical Record Number	Description		Default Value	M/O	Length	
1	Test Data		00 00 00	М	3 bytes	
2	Test Data		00 00 00	М	3 bytes	
	11.17.1					

C.2.15 EF_{TRAC} (Transparent Read Access Condition CHV2)

Identifier: '6F0E'		Str	Structure: transparent Mano		datory
Rec	Record length: 3 bytes		Update activity: low		
	A	ccess Condi	tions:		
	READ		CHV2		
	UPDATE		ALWAYS		
	INCREAS	SE	ALWAYS		
	INVALID	ATE	ALWAYS		
	REHABIL	LITATE	ALWAYS		
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data		00 00 00	М	3 bytes

C.2.16 EF_{TIAC} (Transparent Invalidate Access Condition CHV1)

Identifie	Identifier: '6F0F'		Structure: transparent Mandat		datory
Rec	ord length: 3 bytes		Update activity: low		
	A	ccess Condi	tions:		
	READ		ALWAYS		
	UPDATE		ALWAYS		
	INCREAS	SE	ALWAYS		
	INVALI	DATE	CHV1		
	REHABILITATE		ALWAYS		
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data		00 00 00	М	3 bytes

C.2.17 EF_{CIAC} (Cyclic Increase Access Condition CHV2)

Identifie	er: '6F10'	Structure: cyclic	Man	datory	
Rec	ord length: 3 bytes	Update activity:	Update activity: low		
	Access	Conditions:			
	READ	ALWAYS			
	UPDATE	ALWAYS			
	INCREASE	CHV2			
	INVALIDATE	ALWAYS			
	REHABILITAT	E ALWAYS			
Logical Record	Description	Default Value	M/O	Length	
Number	2000	20.44.11 74.145	11.,	_0g	
1	Test Data	00 00 00	М	3 bytes	
2	Test Data	00 00 00	М	3 bytes	

C.2.18 EF_{CIAA} (Cyclic Increase Access Condition ADM)

Identifie	Identifier: '6F11'		Structure: cyclic Mandatory		datory
Rec	Record length: 3 bytes		Update activity: low		
	Acc	cess Cond	itions:		
	READ		ALWAYS		
	UPDATE		ALWAYS		
	INCREAS	E	ADM		
	INVALIDA	TE	ALWAYS		
	REHABILITAT		ALWAYS		
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data		00 00 00	М	3 bytes
2	Test Data		00 00 00	М	3 bytes

C.2.19 EF_{CNRI} (Cyclic Never Rehabilitate Invalidated)

Identifie	er: '6F12'		Structure: cyclic	Man	datory
Rec	Record length: 3 bytes		Update activity: low		
	A	ccess Cond	itions:		
	READ		ALWAYS		
	UPDATE		ALWAYS		
	INCREAS	SE	ALWAYS		
	INVALIDA	ATE	ALWAYS		
	REHABI	LITATE	NEVER		
Logical Record	Description		Default Value	M/O	Length
Number	·				
1	Test Data		00 00 00	М	3 bytes
2	Test Data		00 00 00	М	3 bytes

The file status shall be invalidated as defined in [3]

Annex D (normative): sim.test.util package and loading, testing and cleaning script examples.

See attached files:

- Annex_D_SimTestUtil.zip
- Annex_D_Examples.zip

Annex E (normative): Test Area files.

See attached file:

- Annex_E_SourceCode.zip

Annex F (Normative): AID numbering and acronyms for Framework tests

F.1 Toolkit Installation Parameters (TIN)

Test Area within the chapter	Acronyms	Numbering on 6 bits
Timer allocation	TMAL	000001
Item identifier	ITID	000010
Item position	ITPO	000011
Access conditions	ACCO	000100
Priority level	PRLV	000101
Maximum length for each menu entry	MLME	000110
Number of menu entries	NBME	000111
Memory space	MESP	001000

F.2 Minimum Handler Availability (MHA)

Test Area within the chapter	Acronyms	Numbering on 6 bits
ProactiveHandler	PAHD	000001
ProactiveResponseHandler	PRHD	000010
EnvelopeHandler	ENHD	000011
EnvelopeResponseHandler	ERHD	000100

F.3 Handler Integrity (HIN)

Test Area within the chapter	Acronyms	Numbering on 6 bits
ProactiveHandler	PAHD	000001
ProactiveResponseHandler	PRHD	000010
EnvelopeHandler	ENHD	000011
RFU (EnvelopeResponseHandler)	(ERHD)	000100

F.4 Applet Triggering (APT)

Test Area within the chapter	Acronyms	Numbering on 6 bits
EVENT_PROFILE_DOWNLOAD	EPDW	000001
EVENT_MENU_SELECTION	EMSE	000010
EVENT_MENU_SELECTION_HELP_REQUEST	EMSH	000011
EVENT_FORMATTED_SMS_PP_ENV	EFSE	000100
EVENT_UNFORMATTED_SMS_PP_ENV	EUSE	000101
EVENT_CALL_CONTROL_BY_SIM	ECCN	000110
EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM	EMCN	000111
EVENT_TIMER_EXPIRATION	ETEX	001000
EVENT_UNFORMATTED_SMS_CB	EUCB	001001
EVENT_EVENT_DOWNLOAD_MT_CALL	EDMC	001010
EVENT_EVENT_DOWNLOAD_CALL_CONNECTED	EDCC	001011
EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED	EDCD	001100
EVENT_EVENT_DOWNLOAD_LOCATION_STATUS	EDLS	001101
EVENT_EVENT_DOWNLOAD_USER_ACTIVITY	EDUA	001110
EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE	EDIS	001111
EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS	EDCR	010000
RFU (EVENT_UNRECOGNIZED_ENVELOPE)	(EUEN)	010001
EVENT_STATUS_COMMAND	ESTC	010010
EVENT EVENT DOWNLOAD LANGUAGE SELECTION	EDLG	010011
EVENT EVENT DOWNLOAD BROWSER TERMINATION	<u>EDBT</u>	010100
EVENT FORMATTED SMS CB	EFCB	010101

F.5 Proactive Command Sending (PCS)

Test Area within the chapter	Acronyms	Numbering on 6 bits
System Proactive commands	SPCO	000001
Interaction with GSM commands	IGCO	000010
Errors during proactive command sending	EPCS	000011

F.6 Envelope Response Posting (ERP)

Test Area within the chapter	Acronyms	Numbering on 6 bits
EVENT_CALL_CONTROL_BY_SIM	ECCN	000001
EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM	EMCN	000010
EVENT_UNRECOGNIZED_ENVELOPE	EUEN	000011

F.7 Framework Security (FWS)

Test Area within the chapter	Acronyms	Numbering on 6 bits
Input data	INDA	000001
Output data	OUDA	000010

F.8 File System Context (FSC)

Test Area within the chapter	Acronyms	Numbering on 6 bits
Initial Context	INIT	000001
Context Preservation for Current File	CUFI	000010
Context Preservation for Current Record	CURE	000011

F.9 Exception Handling (EXH)

Test Area within the chapter	Acronyms	Numbering on 6 bits
Hide exception to the mobile	HEME	000001
Interaction with multi-triggering	IMTG	000010

F.10 Other parts transferred to framework from API (API)

Test Area within the chapter	Acronyms	Numbering on 6 bits
A handler is a temporary JCRE Entry Point object	HEPO	000001
Transaction	TRAN	000010
Timer Id between Applets	TMID	000011