ETSI TS 102 268 V7.0.0 (2015-04)



Smart Cards;
Test specification for the UICC
Application Programming Interface (API) for Java Card™
(Release 7)

Reference RTS/SCP-T005v700 Keywords API, smart card, testing

ETSI

650 Route des Lucioles F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C Association à but non lucratif enregistrée à la Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

The present document can be downloaded from: http://www.etsi.org/standards-search

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status.

Information on the current status of this and other ETSI documents is available at

http://portal.etsi.org/tb/status/status.asp

If you find errors in the present document, please send your comment to one of the following services: https://portal.etsi.org/People/CommiteeSupportStaff.aspx

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2015.
All rights reserved.

DECTTM, **PLUGTESTS**TM, **UMTS**TM and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members. **3GPP**TM and **LTE**TM are Trade Marks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

GSM® and the GSM logo are Trade Marks registered and owned by the GSM Association.

Contents

Intellectual 1	Property Rights	29
Foreword		29
Modal verbs	s terminology	29
1 Scope	·	30
2 Refer	ences	30
	ormative references	
	Formative references	
3 Defin	itions and abbreviations	31
	finitions	
	breviations	
4 Test e	environment	33
	plicability	
	st environment description	
	sts format	
4.3.1	Test area reference	33
4.3.1.1	Conformance requirements	34
4.3.1.2	Test area files	34
4.3.1.3	Test coverage	
4.3.1.4	Test procedure	
	tial conditions	
	ckage name	
	D Coding	
	st equipment	
4.7.1 4.7.2	Test tool	
4.7.2 4.7.3	Util package	
4.7.4	Java Software Development kit version	
	•	
	olan	
	ckage uicc.access	
5.1.1 5.1.1.1	Interface FileView	
5.1.1.1 5.1.1.1.1	Method activateFile	
5.1.1.1.2	Test area files	
5.1.1.1.3	Test coverage	
5.1.1.1.4	Test procedure	
5.1.1.2	Method deactivateFile	
5.1.1.2.1	Conformance requirement	
5.1.1.2.2	Test area files	40
5.1.1.2.3	Test coverage	40
5.1.1.2.4	Test procedure	40
5.1.1.3	Method increase	
5.1.1.3.1	Conformance requirement	
5.1.1.3.2	Test area files	
5.1.1.3.3	Test coverage	
5.1.1.3.4	Test procedure	
5.1.1.4	Method readBinary	
5.1.1.4.1 5.1.1.4.2	Conformance requirement Test area files	
5.1.1.4.2	Test coverage	
5.1.1.4.4	Test procedure	
5.1.1.5	Method readRecord	
5.1.1.5.1	Conformance requirement	
5.1.1.5.2	Test area files	
5.1.1.5.3	Test coverage	

5.1.1.5.4	Test procedure	
5.1.1.6	Method searchRecord	
5.1.1.6.1	Conformance requirement	
5.1.1.6.2	Test area files	
5.1.1.6.3	Test coverage	
5.1.1.6.4	Test procedure	
5.1.1.7	Method select (byte sfi)	
5.1.1.7.1	Conformance requirement	
5.1.1.7.2	Test area files	
5.1.1.7.3	Test coverage	
5.1.1.7.4	Test procedure	
5.1.1.8	Method select (short fid)	
5.1.1.8.1	Conformance requirement	
5.1.1.8.2	Test area files	
5.1.1.8.3	Test coverage	
5.1.1.8.4	Test procedure	
5.1.1.9 5.1.1.9.1	Method select(short fid, byte[] fcp, short fcpOffset, short fcpLength)	
5.1.1.9.1	Test area files	
5.1.1.9.2	Test coverage	
5.1.1.9.4	Test procedure	
5.1.1.9.4	Method status	
5.1.1.10.1	Conformance requirement	
5.1.1.10.1	Test area files	
5.1.1.10.3	Test coverage	
5.1.1.10.4	Test procedure	
5.1.1.11	Method updateBinary	
5.1.1.11.1	Conformance requirement	
5.1.1.11.2	Test area files	78
5.1.1.11.3	Test coverage	78
5.1.1.11.4	Test procedure	
5.1.1.12	Method updateRecord	
5.1.1.12.1	Conformance requirement	
5.1.1.12.2	Test area files	
5.1.1.12.3	Test coverage	
5.1.1.12.4	Test procedure	
5.1.2	Interface UICCConstants	
5.1.3 5.1.3.1	Interface UICCSystem	
5.1.3.1.1	Conformance requirement:	
5.1.3.1.2	Test area files	
5.1.3.1.3	Test coverage	
5.1.3.1.4	Test procedure	
5.1.3.2	Method getTheFileView	
5.1.3.2.1	Conformance requirement:	
5.1.3.2.2	Test area files	
5.1.3.2.3	Test coverage	
5.1.3.2.4	Test procedure	
5.1.3.3	Method getTheFileView	
5.1.3.3.1	Conformance requirement:	95
5.1.3.3.2	Test area files	96
5.1.3.3.3	Test coverage	
5.1.3.3.4	Test procedure	
5.1.4	Interface UICCException	
5.1.4.1	Constructor	
5.1.4.1.1	Conformance Requirement:	
5.1.4.1.2 5.1.4.1.3	Test Coverage	
5.1.4.1.3	Test Procedure	
5.1.4.1.4	Method throwIt	
5.1.4.2.1	Conformance Requirement:	
5.1.4.2.2	Test area files	

5.1.4.2.3	Test Coverage	101
5.1.4.2.4	Test Procedure	101
5.1.4.3	Reason Codes	
5.1.5	Contexts	
5.1.5.1	Context tests	
5.1.5.1.1	Conformance requirement	
5.1.5.1.2	Test area files	
5.1.5.1.3	Test coverage	
5.1.5.1.4	Test procedure	
5.2	Package uicc.toolkit	
5.2.1	Interface EditHandler	
5.2.2	Interface EnvelopeHandler	
5.2.2.1	Method getItemIdentifier	
5.2.2.1.1	Conformance requirement:	
5.2.2.1.2	Test area files	
5.2.2.1.3	Test area mes	
5.2.2.1.4	Test procedure	
5.2.2.1.4	Method getLength	
5.2.2.2.1	Conformance requirement	
5.2.2.2.1	Test area files	
5.2.2.2.3		
5.2.2.2.3	Test coverage Test procedure	
5.2.2.3		
5.2.2.3 5.2.2.3.1	Method copy	
5.2.2.3.1	Conformance requirement	
	Test area files	
5.2.2.3.4	Test coverage	
5.2.2.3.4	Test procedure	
5.2.2.4	Method findTLV	
5.2.2.4.1	Conformance requirement	
5.2.2.4.2	Test area files	
5.2.2.4.3	Test coverage	
5.2.2.4.4	Test procedure	
5.2.2.5	Method getValueLength	
5.2.2.5.1	Conformance requirement	
5.2.2.5.2	Test area files	
5.2.2.5.3	Test coverage	
5.2.2.5.4	Test procedure	
5.2.2.6	Method getValueByte	
5.2.2.6.1	Conformance requirement	
5.2.2.6.2	Test area files	
5.2.2.6.3	Test coverage	
5.2.2.6.4	Test procedure	
5.2.2.7	Method copyValue	
5.2.2.7.1	Conformance requirement	
5.2.2.7.2	Test area files	
5.2.2.7.3	Test coverage	
5.2.2.7.4	Test procedure	
5.2.2.8	Method compareValue	
5.2.2.8.1	Conformance requirement	
5.2.2.8.2	Test area files	
5.2.2.8.3	Test coverage	
5.2.2.8.4	Test procedure	
5.2.2.9	Method findAndCopyValue(byte tag, byte[] dstBuffer, short dstOffset)	
5.2.2.9.1	Conformance requirement	
5.2.2.9.2	Test area files	
5.2.2.9.3	Test coverage	
5.2.2.9.4	Test procedure	
5.2.2.10	Method findAndCopyValue(byte tag, byte occurrence, short valueOffset, byte[] dstBuf	
	dstOffset, short dstLength)	
5.2.2.10.1	1	
5.2.2.10.2		
5.2.2.10.3	Test coverage	129

5.2.2.10.4	Test procedure	129
5.2.2.11	Method findAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset)	131
5.2.2.11.1	Conformance requirement	
5.2.2.11.2	Test area files	
5.2.2.11.3	Test coverage	
5.2.2.11.4	Test procedure	
5.2.2.12	Method findAndCompareValue(byte tag, byte occurrence, short valueOffset, byte[]	132
3.2.2.12	compareBuffer, short compareOffset, short compareLength)	122
5.2.2.12.1		
	Conformance requirement	
5.2.2.12.2	Test area files	
5.2.2.12.3	Test coverage	
5.2.2.12.4	Test procedure	
5.2.2.13	Method getCapacity	
5.2.2.13.1	Conformance requirement	
5.2.2.13.2	Test area files	
5.2.2.13.3	Test coverage	137
5.2.2.13.4	Test procedure	138
5.2.2.14	Method getChannelIdentifier	138
5.2.2.14.1	Conformance requirement	138
5.2.2.14.2	Test area files	
5.2.2.14.3	Test coverage	
5.2.2.14.4	Test procedure	
5.2.2.15	Method getChannelStatus	
5.2.2.15.1	Conformance requirement	
5.2.2.15.1	Test area files	
5.2.2.15.3	Test coverage	
5.2.2.15.4	Test procedure	
5.2.2.16	Method getValueShort	
5.2.2.16.1	Conformance requirement	
5.2.2.16.2	Test area files	
5.2.2.16.3	Test coverage	
5.2.2.16.4	Test procedure	
5.2.2.17	Method getSize	143
5.2.2.17.1	Conformance requirement	143
5.2.2.17.2	Test area files	144
5.2.2.17.3	Test coverage	144
5.2.2.17.4	Test procedure	144
5.2.2.18	Method getTag	144
5.2.2.18.1	Conformance requirement	
5.2.2.18.2	Test area files	
5.2.2.18.3	Test coverage	
5.2.2.18.4	Test procedure	
5.2.3	Interface EnvelopeResponseHandler	
5.2.3.1	Method post	
5.2.3.1.1		
	Conformance requirement	
5.2.3.1.2	Test area files	
5.2.3.1.3	Test coverage	
5.2.3.1.4	Test procedure	
5.2.3.2	Method postAsBERTLV	
5.2.3.2.1	Conformance requirement	
5.2.3.2.2	Test area files	147
5.2.3.2.3	Test coverage	
5.2.3.2.4	Test procedure	148
5.2.3.3	Method getLength	149
5.2.3.3.1	Conformance requirement	
5.2.3.3.2	Test area files	
5.2.3.3.3	Test coverage	
5.2.3.3.4	Test procedure	
5.2.3.4	Method copy	
5.2.3.4.1	Conformance requirement	
5.2.3.4.2	Test area files	
5.2.3.4.3	Test died mes	
J.4.J.T.J	1 001 00 101420	1 - 70

5.2.3.4.4	Test procedure	151
5.2.3.5	Method findTLV	152
5.2.3.5.1	Conformance requirement	
5.2.3.5.2	Test area files	
5.2.3.5.3	Test coverage	
5.2.3.5.4	Test procedure	
5.2.3.6	Method getValueLength	
5.2.3.6.1	Conformance requirement	
5.2.3.6.2	Test area files	
5.2.3.6.3	Test coverage	
5.2.3.6.4		
	Test procedure	
5.2.3.7	Method getValueByte	
5.2.3.7.1	Conformance requirement	
5.2.3.7.2	Test area files	
5.2.3.7.3	Test coverage	
5.2.3.7.4	Test procedure	
5.2.3.8	Method copyValue	
5.2.3.8.1	Conformance requirement	
5.2.3.8.2	Test area files	
5.2.3.8.3	Test coverage	
5.2.3.8.4	Test procedure	157
5.2.3.9	Method compareValue	
5.2.3.9.1	Conformance requirement	159
5.2.3.9.2	Test area files	159
5.2.3.9.3	Test coverage	160
5.2.3.9.4	Test procedure	160
5.2.3.10	Method findAndCopyValue(byte tag, byte[] dstBuffer, short valueOffset)	
5.2.3.10.1	Conformance requirement	
5.2.3.10.2	Test area files	
5.2.3.10.3	Test coverage	
5.2.3.10.4	Test procedure	
5.2.3.11	Method findAndCopyValue(byte tag, byte occurrence, short valueOffset, byte[] dstBuffer, sl	
J.2.J.11	dstOffset, short dstLength)	
5.2.3.11.1	Conformance requirement	
5.2.3.11.2	Test area files.	
5.2.3.11.3	Test coverage	
5.2.3.11.4	Test procedure	
5.2.3.12	Method findAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset)	
5.2.3.12.1	Conformance requirement	
5.2.3.12.1	Test area files	
5.2.3.12.3		
	Test coverage	
5.2.3.12.4	Test procedure	109
5.2.3.13	Method findAndCompareValue(byte tag, byte occurrence, short valueOffset, byte[]	171
.	compareBuffer, short compareOffset, short compareLength)	
5.2.3.13.1	Conformance requirement	
5.2.3.13.2	Test area files	
5.2.3.13.3	Test coverage	
5.2.3.13.4	Test procedure	
5.2.3.14	Method appendArray	
5.2.3.14.1	Conformance requirement	175
5.2.3.14.2	Test area files	176
5.2.3.14.3	Test coverage	176
5.2.3.14.4	Test procedure	176
5.2.3.15	Method appendTLV(byte tag, byte value)	177
5.2.3.15.1	Conformance requirement	
5.2.3.15.2	Test area files	
5.2.3.15.3	Test coverage	
5.2.3.15.4	Test procedure	
5.2.3.16	Method appendTLV(byte tag, byte value1, byte value2)	
5.2.3.16.1	Conformance requirements	
5.2.3.16.2	Test area files.	
5.2.3.16.3	Test coverage.	

5.2.3.10.4	1 est procedure	
5.2.3.17	Method appendTLV(byte tag, byte[] value, short valueoffset, short valuelength)	180
5.2.3.17.1	Conformance requirement	
5.2.3.17.2	Test area files	180
5.2.3.17.3	Test coverage	
5.2.3.17.4	Test procedure	
5.2.3.18	Method appendTLV(byte tag, byte value1, byte[] value2, short value2offset, short value2length)	
5.2.3.18.1	Conformance requirement	
5.2.3.18.2	Test area files.	
5.2.3.18.3	Test coverage	
5.2.3.18.4	Test procedure	
5.2.3.19	Method clear	
5.2.3.19.1	Conformance requirement	
5.2.3.19.2	Test area files	
5.2.3.19.3	Test coverage	
5.2.3.19.4	Test procedure	
5.2.3.20	Method getCapacity	
5.2.3.20.1	Conformance requirement	
5.2.3.20.2	Test area files	
5.2.3.20.3	Test coverage	
5.2.3.20.4	Test procedure	187
5.2.3.21	Method getValueShort	187
5.2.3.21.1	Conformance requirement	187
5.2.3.21.2	Test area files	187
5.2.3.21.3	Test coverage	187
5.2.3.21.4	Test procedure	
5.2.3.22	Method appendTLV(byte tag, byte value1, short value2)	
5.2.3.22.1	Conformance requirements	
5.2.3.22.2	Test area files	
5.2.3.22.3	Test coverage	
5.2.3.22.4	Test procedure	
5.2.3.23	Method appendTLV(byte tag, short value)	
5.2.3.23.1	Conformance requirements	
5.2.3.23.1	Test area files	
5.2.3.23.2	Test coverage	
5.2.3.23.4	Test procedure	
5.2.3.24	Method appendTLV(byte tag, short value1, short value2)	
5.2.3.24.1	Conformance requirements	
5.2.3.24.2	Test area files	
5.2.3.24.3	Test coverage	
5.2.3.24.4	Test procedure	192
5.2.3.25	Method appendTLV(byte tag, byte[] value1, short value1Offset, short value1Length, byte[]	
	value2, short value2Offset, short value2Length)	
5.2.3.25.1	Conformance requirements	192
5.2.3.25.2	Test area files	193
5.2.3.25.3	Test coverage	193
5.2.3.25.4	Test procedure	193
5.2.4	Interface ProactiveHandler	
5.2.4.1	Method init	196
5.2.4.1.1	Conformance requirement	
5.2.4.1.2	Test area files	
5.2.4.1.3	Test coverage	
5.2.4.1.4	Test procedure	
5.2.4.2	Method initDisplayText	
5.2.4.2.1	Conformance requirement	
5.2.4.2.1	Test area files	
5.2.4.2.3		
	Test procedure	
5.2.4.2.4	Test procedure	
5.2.4.3	Method initGetInkey	
5.2.4.3.1	Conformance requirement	
5.2.4.3.2	Test area files	
52133	Test coverage	201

5.2.4.3.4	Test procedure	
5.2.4.4	Method initGetInput	
5.2.4.4.1	Conformance requirement	
5.2.4.4.2	Test area files	
5.2.4.4.3	Test coverage	
5.2.4.4.4	Test procedure	
5.2.4.5	Method send	
5.2.4.5.1	Conformance requirement	
5.2.4.5.2	Test area files	
5.2.4.5.3	Test coverage	
5.2.4.5.4	Test procedure	
5.2.4.6	Method getLength	
5.2.4.6.1	Conformance requirement	
5.2.4.6.2	Test area files	
5.2.4.6.3	Test coverage	
5.2.4.6.4	Test procedure	
5.2.4.7	Method copy	
5.2.4.7.1	Conformance requirement	
5.2.4.7.2	Test area files	
5.2.4.7.3	Test coverage	
5.2.4.7.4	Test procedure	
5.2.4.8	Method findTLV	
5.2.4.8.1	Conformance requirement	
5.2.4.8.2	Test area files	
5.2.4.8.4	Test coverage	
5.2.4.8.3	Test procedure	
5.2.4.9	Method getValueLength	
5.2.4.9.1	Conformance requirement	
5.2.4.9.2	Test area files	
5.2.4.9.3	Test coverage	
5.2.4.9.4	Test procedure	
5.2.4.10	Method getValueByte	
5.2.4.10.1	Conformance requirement	
5.2.4.10.2	Test area files	
5.2.4.10.3	Test coverage	
5.2.4.10.4	Test procedure	
5.2.4.11	Method copyValue	
5.2.4.11.1	Conformance requirement	
5.2.4.11.2	Test area files	
5.2.4.11.3	Test coverage	
5.2.4.11.4	Test procedure	
5.2.4.12	Method compareValue	
5.2.4.12.1	Conformance requirement	
5.2.4.12.2	Test area files	
5.2.4.12.3	Test coverage	
5.2.4.12.4	Test procedure	
5.2.4.13	Method findAndCopyValue(byte tag, byte[] dstBuffer, short valueOffset)	
5.2.4.13.1	Conformance requirement	
5.2.4.13.2	Test area files	
5.2.4.13.3	Test coverage	
5.2.4.13.4	Test procedure	223
5.2.4.14	Method findAndCopyValue(byte tag, byte occurrence, short valueOffset, byte[] dstBuffer, short	
504141	dstOffset, short dstLength)	
5.2.4.14.1	Conformance requirement	
5.2.4.14.2	Test area files	
5.2.4.14.3	Test coverage	
5.2.4.14.4	Test procedure	
5.2.4.15	Method findAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset)	
5.2.4.15.1	Conformance requirement	
5.2.4.15.2	Test area files	
5.2.4.15.3	Test coverage	
5.2.4.15.4	Test procedure	229

5.2.4.16	Method findAndCompareValue(byte tag, byte occurrence, short valueOffset, byte[]	
	compareBuffer, short compareOffset, short compareLength)	
5.2.4.16.1	Conformance requirement	230
5.2.4.16.2	Test area files	231
5.2.4.16.3	Test coverage	231
5.2.4.16.4	Test procedure	232
5.2.4.17	Method appendArray	
5.2.4.17.1	Conformance requirement	234
5.2.4.17.2	Test area files.	
5.2.4.17.3	Test coverage	
5.2.4.17.4	Test procedure	
5.2.4.18	Method appendTLV(byte tag, byte value)	
5.2.4.18.1	Conformance requirement:	
5.2.4.18.2	Test area files	
5.2.4.18.3	Test coverage	
5.2.4.18.4	Test procedure	
5.2.4.19	Method appendTLV(byte tag, byte value1, byte value2)	
5.2.4.19.1	Conformance requirements	
5.2.4.19.2	Test area files.	
5.2.4.19.3	Test coverage	
5.2.4.19.4	Test coverage	
5.2.4.20	Method appendTLV(byte tag, byte[] value, short valueoffset, short valuelength)	
5.2.4.20.1	Conformance requirement	
5.2.4.20.2	Test area files	
5.2.4.20.3	Test coverage	
5.2.4.20.4	Test procedure	
5.2.4.21	Method appendTLV(byte tag, byte value1, byte[] value2, short value2offset, short value2length).	
5.2.4.21.1	Conformance requirement	
5.2.4.21.2	Test area files	
5.2.4.21.3	Test coverage	
5.2.4.21.4	Test procedure	
5.2.4.22	Method clear	
5.2.4.22.1	Conformance requirement	
5.2.4.22.2	Test area files	
5.2.4.22.3	Test coverage	246
5.2.4.22.4	Test procedure	246
5.2.4.23	Method getCapacity	246
5.2.4.23.1	Conformance requirement	246
5.2.4.23.2	Test area files	246
5.2.4.23.3	Test coverage	246
5.2.4.23.4	Test procedure	247
5.2.4.24	Method initCloseChannel.	
5.2.4.24.1	Conformance requirement	
5.2.4.24.2	Test area files	
5.2.4.24.3	Test coverage	
5.2.4.24.4	Test procedure	
5.2.4.25	Method getValueShort	
5.2.4.25.1	Conformance requirement	
5.2.4.25.2	Test area files	
5.2.4.25.3	Test coverage	
5.2.4.25.4	Test procedure	
5.2.4.26	Method appendTLV(byte tag, byte value1, short value2)	
5.2.4.26.1		
	Conformance requirements.	
5.2.4.26.2	Test governors	
5.2.4.26.3	Test coverage	
5.2.4.26.4	Test procedure	
5.2.4.27	Method appendTLV(byte tag, short value)	
5.2.4.27.1	Conformance requirements	
5.2.4.27.2	Test area files	
5.2.4.27.3	Test coverage	
5.2.4.27.4	Test procedure	
5.2.4.28	Method appendTLV(byte tag, short value1, short value2)	254

5.2.4.28.1	Conformance requirements	
5.2.4.28.2	Test area files.	
5.2.4.28.3	Test coverage	
5.2.4.28.4	Test procedure	254
5.2.4.29	Method appendTLV(byte tag, byte[] value1, short value1Offset, short value1Length, byte[]	
	value2, short value2Offset, short value2Length)	255
5.2.4.29.1	Conformance requirements	255
5.2.4.29.2	Test area files	256
5.2.4.29.3	Test coverage	256
5.2.4.29.4	Test procedure	256
5.2.4.30	Method initMoreTime	259
5.2.4.30.1	Conformance requirement	259
5.2.4.30.2	Test area files	259
5.2.4.30.3	Test coverage	260
5.2.4.30.4	Test procedure	260
5.2.5	Interface ProactiveResponseHandler	
5.2.5.1	Method copyAdditionalInformation	260
5.2.5.1.1	Conformance requirement	260
5.2.5.1.2	Test area files	261
5.2.5.1.3	Test coverage	261
5.2.5.1.4	Test procedure	
5.2.5.2	Method copyTextString	
5.2.5.2.1	Conformance requirement	264
5.2.5.2.2	Test area files	
5.2.5.2.3	Test coverage	
5.2.5.2.4	Test procedure	
5.2.5.3	Method getAdditionalInformationLength	
5.2.5.3.1	Conformance requirement	
5.2.5.3.2	Test area files	
5.2.5.3.3	Test coverage	
5.2.5.3.4	Test procedure	
5.2.5.4	Method getGeneralResult	
5.2.5.4.1	Conformance requirement	
5.2.5.4.2	Test area files	
5.2.5.4.3	Test coverage	
5.2.5.4.4	Test procedure	
5.2.5.5	Method getItemIdentifier	
5.2.5.5.1	Conformance requirement	
5.2.5.5.2	Test area files	273
5.2.5.5.3	Test coverage	
5.2.5.5.4	Test procedure	
5.2.5.6	Method getTextStringCodingScheme	
5.2.5.6.1	Conformance requirement	
5.2.5.6.2	Test area files	274
5.2.5.6.3	Test coverage	
5.2.5.6.4	Test procedure	
5.2.5.7	Method GetTextStringLength	
5.2.5.7.1	Conformance requirement	
5.2.5.7.2	Test area files	
5.2.5.7.3	Test coverage	
5.2.5.7.4	Test procedure	
5.2.5.8	Method getLength	
5.2.5.8.1	Conformance requirement	
5.2.5.8.2	Test area files	
5.2.5.8.3	Test coverage	
5.2.5.8.4	Test procedure	
5.2.5.9	Method copy	
5.2.5.9.1	Conformance requirement	
5.2.5.9.2	Test area files.	
5.2.5.9.3	Test coverage	
5.2.5.9.4	Test procedure	
5.2.5.10	Method findTLV	

5.2.5.10.1	Conformance requirement	
5.2.5.10.2	Test area files	
5.2.5.10.3	Test coverage	
5.2.5.10.4	Test procedure	
5.2.5.11	Method getValueLength	
5.2.5.11.1	Conformance requirement	
5.2.5.11.2	Test area files	
5.2.5.11.3	Test coverage	
5.2.5.11.4	Test procedure	
5.2.5.12	Method getValueByte	
5.2.5.12.1	Conformance requirement	
5.2.5.12.2	Test area files	
5.2.5.12.3	Test coverage	
5.2.5.12.4	Test procedure	
5.2.5.13	Method copyValue	
5.2.5.13.1	Conformance requirement	
5.2.5.13.2	Test area files	
5.2.5.13.3	Test coverage	
5.2.5.13.4	Test procedure	
5.2.5.14	Method compareValue	
5.2.5.14.1	Conformance requirement	
5.2.5.14.2	Test area files	
5.2.5.14.3	Test coverage	
5.2.5.14.4	Test procedure	
5.2.5.15	Method findAndCopyValue(byte tag, byte[] dstBuffer, short valueOffset)	
5.2.5.15.1	Conformance requirement	
5.2.5.15.2	Test area files	
5.2.5.15.3	Test coverage	
5.2.5.15.4	Test procedure	
5.2.5.16	Method findAndCopyValue(byte tag, byte occurrence, short valueOffset, byte[] dstBuffer, byte[] dstBuf	
	dstOffset, short dstLength)	
5.2.5.16.1	Conformance requirement	
5.2.5.16.2	Test area files	
5.2.5.16.3	Test coverage	
5.2.5.16.4	Test procedure	
5.2.5.17	Method findAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset)	
5.2.5.17.1	Conformance requirement	
5.2.5.17.2	Test area files	
5.2.5.17.3	Test coverage	
5.2.5.17.4	Test procedure	298
5.2.5.18	Method findAndCompareValue(byte tag, byte occurrence, short valueOffset, byte[]	200
505101	compareBuffer, short compareOffset, short compareLength)	
5.2.5.18.1	Conformance requirement	
5.2.5.18.2	Test area files.	
5.2.5.18.3	Test coverage	
5.2.5.18.4	Test procedure	
5.2.5.19	Method getCapacity	
5.2.5.19.1	Conformance requirement	
5.2.5.19.2	Test area files	
5.2.5.19.3	Test coverage	
5.2.5.19.4	Test procedure	
5.2.5.20	Method getChannelIdentifier	
5.2.5.20.1 5.2.5.20.2	Conformance requirement	
	Test area files.	
5.2.5.21.3	Test procedure	
5.2.5.20.4	Test procedure	
5.2.5.21 5.2.5.21.1	Method copyChannelData Conformance requirement	
5.2.5.21.1	Test area files	
5.2.5.21.2 5.2.5.21.3		
5.2.5.21.3	Test coverage Test procedure	
5.2.5.21.4	Method getValueShort	
J.4.J.44	171001100 got 7 010001101t	

5.2.5.22.1	Conformance requirement	
5.2.5.22.2	Test area files	
5.2.5.22.3	Test coverage	310
5.2.5.22.4	Test procedure	310
5.2.5.23	Method getChannelStatus	310
5.2.5.23.1	Conformance requirement	310
5.2.5.23.2	Test area files	311
5.2.5.23.3	Test coverage	311
5.2.5.23.4	Test procedure	
5.2.6	Interface ToolkitConstants	
5.2.6.1	Constants	
5.2.6.1.1	Conformance requirement	
5.2.6.1.2	Test area files	
5.2.6.1.3	Test procedure	
5.2.7	Interface ToolkitInterface	
5.2.7.1	Method processToolkit	
5.2.7.1.1	Conformance requirement:	
5.2.7.1.2	Test area files	
5.2.7.1.3	Test coverage	
5.2.8	Interface ToolkitRegistry	
5.2.8.1	Method allocateTimer	
5.2.8.1.1	Conformance requirement:	
5.2.8.1.2	Test area files	
5.2.8.1.3	Test area mes Test coverage	
5.2.8.1.4		
5.2.8.2	Test procedure	
	Method changeMenuEntry	
5.2.8.2.1	Conformance requirement:	
5.2.8.2.2	Test area files	
5.2.8.2.3	Test coverage	
5.2.8.2.4	Test procedure	
5.2.8.3	Method clearEvent	
5.2.8.3.1	Conformance requirement:	
5.2.8.3.2	Test area files	
5.2.8.3.3	Test coverage	
5.2.8.3.4	Test procedure	
5.2.8.4	Method disableMenuEntry	
5.2.8.4.1	Conformance requirement:	
5.2.8.4.2	Test area files	
5.2.8.4.3	Test coverage	325
5.2.8.4.4	Test procedure	
5.2.8.5	Method enableMenuEntry	
5.2.8.5.1	Conformance requirement:	326
5.2.8.5.2	Test area files	
5.2.8.5.3	Test coverage	327
5.2.8.5.4	Test procedure	327
5.2.8.6	Method getPollInterval	
5.2.8.6.1	Conformance requirement:	328
5.2.8.6.2	Test area files	328
5.2.8.6.3	Test coverage	328
5.2.8.6.4	Test procedure	328
5.2.8.7	Method initMenuEntry	329
5.2.8.7.1	Conformance requirement:	
5.2.8.7.2	Test area files	
5.2.8.7.3	Test coverage	
5.2.8.7.4	Test procedure	
5.2.8.8	Method isEventSet	
5.2.8.8.1	Conformance requirement:	
5.2.8.8.2	Test area files.	
5.2.8.8.3	Test area mes	
5.2.8.8.4	Test coverage	
5.2.8.9	Method releaseTimer	
5.2.8.9.1	Conformance requirement:	

5.2.8.9.2	Test area files	
5.2.8.9.3	Test coverage	
5.2.8.9.4	Test procedure	
5.2.8.10	Method requestPollInterval	338
5.2.8.10.1	Conformance requirement	338
5.2.8.10.2	Test area files	338
5.2.8.10.3	Test coverage	338
5.2.8.10.4	Test procedure	338
5.2.8.11	Method setEvent	339
5.2.8.11.1	Conformance requirement	339
5.2.8.11.2	Test area files.	
5.2.8.11.3	Test coverage	
5.2.8.11.4	Test procedure	
5.2.8.12	Method setEventList	
5.2.8.12.1	Conformance requirement	
5.2.8.12.2	Test area files.	
5.2.8.12.3	Test coverage	
5.2.8.12.4	Test procedure	
5.2.8.13	Method allocateServiceIdentifier	
5.2.8.13.1	Conformance requirement	
5.2.8.13.1	Test area files	
5.2.8.13.3	Test coverage	
5.2.8.13.4 5.2.8.14	Test procedure	
	Method releaseServiceIdentifier	
5.2.8.14.1	Conformance requirement	
5.2.8.14.2	Test area files	
5.2.8.14.3	Test coverage	
5.2.8.14.4	Test procedure	350
5.2.8.15	Method registerFileEvent(short event, byte[] baFileList, short sOffset1, short sLength1, byte[]	
	baADFAid, short sOffset2, byte bLength2)	
5.2.8.15.1	Conformance requirement	
5.2.8.15.2	Test area files.	
5.2.8.15.3	Test coverage	
5.2.8.15.4	Test procedure	
5.2.8.16	Method registerFileEvent(short event, FileView aFileView)	
5.2.8.16.1	Conformance requirement	
5.2.8.16.2	Test area files	
5.2.8.16.3	Test coverage	
5.2.8.16.4	Test procedure	359
5.2.8.17	Method deregisterFileEvent(short event, byte[] baFileList, short sOffset1, short sLength1, byte[]	
	baADFAid, short sOffset2, byte bLength2)	362
5.2.8.17.1	Conformance requirement	362
5.2.8.17.2	Test area files	363
5.2.8.17.3	Test coverage	364
5.2.8.17.4	Test procedure	
5.2.8.18	Method deregisterFileEvent(short event, FileView aFileView)	
5.2.8.18.1	Conformance requirement	
5.2.8.18.2	Test area files.	
5.2.8.18.3	Test coverage	
5.2.8.18.4	Test procedure	
5.2.8.19	Method setMenuEntryTextAttribute	
5.2.8.19.1	Conformance requirement	
5.2.8.19.1	Test area files	
5.2.8.19.3	Test coverage	
5.2.8.19.3	Test procedure	
5.2.9	Interface ViewHandler	
5.2.10	Interface BERTLVEditHandler	
5.2.10.1	Method setTag	
5.2.10.1.1	Conformance requirement	
5.2.10.1.2	Test area files	
5.2.10.1.3	Test coverage	
5.2.10.1.4	Test procedure	375

5.2.10.2	Method getTag	
5.2.10.2.1	Conformance requirement	
5.2.10.2.2	Test area files	
5.2.10.2.3	Test coverage	
5.2.10.3	Method getSize	
5.2.10.3.1	Conformance requirement	
5.2.10.3.2	Test area files	
5.2.10.3.3	Test coverage	377
5.2.10.3.4	Test procedure	
5.2.10.4	Method getLength	
5.2.10.4.1	Conformance requirement	
5.2.10.4.2	Test area files	
5.2.10.4.3	Test coverage	
5.2.10.4.4	Test procedure	
5.2.10.5	Method copy	
5.2.10.5.1	Conformance requirement	
5.2.10.5.2	Test area files	
5.2.10.5.3	Test coverage	
5.2.10.5.4	Test procedure	
5.2.10.6	Method findTLV	
5.2.10.6.1	Conformance requirement	
5.2.10.6.2	Test area files	
5.2.10.6.3	Test coverage	
5.2.10.6.4	Test procedure	
5.2.10.7	Method getValueLength	
5.2.10.7.1	Conformance requirement	
5.2.10.7.2	Test area files	
5.2.10.7.3	Test coverage	
5.2.10.7.4	Test procedure	
5.2.10.8	Method getValueByte	
5.2.10.8.1	Conformance requirement	
5.2.10.8.2	Test area files	
5.2.10.8.3	Test coverage	
5.2.10.8.4	Test procedure	
5.2.10.9	Method copyValue	
5.2.10.9.1	Conformance requirement	
5.2.10.9.2	Test area files	
5.2.10.9.3	Test coverage	
5.2.10.9.4	Test procedure	
5.2.10.10	Method compareValue	
5.2.10.10.1	Conformance requirement	
5.2.10.10.2	Test area files	
5.2.10.10.3	Test coverage	
5.2.10.10.4	Test procedure	
5.2.10.11	Method findAndCopyValue(byte tag, byte[] dstBuffer, short valueOffset)	
5.2.10.11.2	Test area files	
5.2.10.11.3	Test coverage	
5.2.10.11.4 5.2.10.12	Test procedure	
3.2.10.12	dstOffset, short dstLength)dstOffset, short dstLength)	
5 2 10 12 1	Conformance requirement	
5.2.10.12.1 5.2.10.12.2	Test area files	
5.2.10.12.2	Test coverage	
5.2.10.12.3	Test procedure	
5.2.10.12.4	Method findAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset)	
5.2.10.13	Conformance requirement	
5.2.10.13.1	Test area files	
5.2.10.13.2	Test coverage	
5.2.10.13.3	Test procedure	
5.2.10.13.4	Method findAndCompareValue(byte tag, byte occurrence, short valueOffset, byte[]	
J.2.10.17	compareBuffer, short compareOffset, short compareLength)	⊿∩ ∩
5.2.10.14.1	Conformance requirement	

5.2.10.14.2	Test area files.	401
5.2.10.14.3	Test coverage	
5.2.10.14.4	Test procedure	401
5.2.10.15	Method getCapacity	404
5.2.10.15.1	Conformance requirement	404
5.2.10.15.2	Test area files	404
5.2.10.15.3	Test coverage	405
5.2.10.15.4	Test procedure	405
5.2.10.16	Method getValueShort	405
5.2.10.16.1	Conformance requirement	405
5.2.10.16.2	Test area files	405
5.2.10.16.3	Test coverage	406
5.2.10.16.4	Test procedure	406
5.2.10.17	Method appendArray	406
5.2.10.17.1	Conformance requirement	406
5.2.10.17.2	Test area files.	
5.2.10.17.3	Test coverage	407
5.2.10.17.4	Test procedure	
5.2.10.18	Method appendTLV(byte tag, byte value)	
5.2.10.18.1	Conformance requirement	
5.2.10.18.2	Test area files.	
5.2.10.18.3	Test coverage	
5.2.10.18.4	Test procedure	
5.2.10.19	Method appendTLV(byte tag, byte value1, byte value2)	
5.2.10.19.1	Conformance requirements	
5.2.10.19.2	Test area files.	411
5.2.10.19.3	Test coverage	
5.2.10.19.4	Test procedure	
5.2.10.20	Method appendTLV(byte tag, byte[] value, short valueoffset, short valuelength)	
5.2.10.20.1	Conformance requirement	412
5.2.10.20.2	Test area files	412
5.2.10.20.3	Test coverage	
5.2.10.20.4	Test procedure	413
5.2.10.21	Method appendTLV(byte tag, byte value1, byte[] value2, short value2offset, short value2length	
5.2.10.21.1	Conformance requirement	414
5.2.10.21.2	Test area files	
5.2.10.21.3	Test coverage	
5.2.10.21.4	Test procedure	
5.2.10.22	Method appendTLV(byte tag, byte value1, short value2)	
5.2.10.22.1	Conformance requirements.	
5.2.10.22.2	Test area files	
5.2.10.22.3	Test coverage	
5.2.10.22.4	Test procedure	
5.2.10.23	Method appendTLV(byte tag, short value)	
5.2.10.23.1	Conformance requirements	
5.2.10.23.2	Test area files	
5.2.10.23.3	Test coverage	
5.2.10.23.4	Test procedure	
5.2.10.24	Method appendTLV(byte tag, short value1, short value2)	
5.2.10.24.1	Conformance requirements	
5.2.10.24.2	Test area files	
5.2.10.24.3	Test coverage	
5.2.10.24.4	Test procedure	421
5.2.10.25	Method appendTLV(byte tag, byte[] value1, short value1Offset, short value1Length, byte[]	
5 0 10 05 i	value2, short value2Offset, short value2Length)	
5.2.10.25.1	Conformance requirements	
5.2.10.25.2	Test area files	
5.2.10.25.3	Test coverage	
5.2.10.25.4	Test procedure	
5.2.10.26	Method clear	
5.2.10.26.1	Conformance requirement	
5.2.10.26.2	Test area files	426

5.2.10.26.3	Test coverage	
5.2.10.26.4	Test procedure	
5.2.11	Interface BERTLVViewHandler	427
5.2.12	Class EnvelopeHandlerSystem	
5.2.12.1	Method getTheHandler	427
5.2.12.1.1	Conformance requirements	427
5.2.12.1.2	Test area files	427
5.2.12.1.3	Test coverage	427
5.2.12.1.4	Test procedure	427
5.2.13	Class EnvelopeResponseHandlerSystem	428
5.2.13.1	Method getTheHandler	428
5.2.13.1.1	Conformance requirement	428
5.2.13.1.2	Test area files	428
5.2.13.1.3	Test coverage	428
5.2.13.1.4	Test procedure	428
5.2.14	Class ProactiveHandlerSystem	
5.2.14.1	Method getTheHandler	
5.2.14.1.1	Conformance requirement	
5.2.14.1.2	Test area files	429
5.2.14.1.3	Test coverage	429
5.2.14.1.4	Test procedure	
5.2.15	Class ProactiveResponseHandlerSystem	
5.2.15.1	Method getTheHandler	
5.2.15.1.1	Conformance requirement	
5.2.13.1.2	Test area files	
5.2.15.1.3	Test coverage	
5.2.15.1.4	Test procedure	
5.2.16	Class TerminalProfile	
5.2.16.1	Method check(byte index)	
5.2.16.1.1	Conformance requirement	
5.2.16.1.2	Test area files	
5.2.16.1.3	Test coverage	
5.2.16.1.4	Test procedure	
5.2.16.2	Method check(byte [] mask, short offset, short length)	
5.2.16.2.1	Conformance requirement	
5.2.16.2.2	Test area files	
5.2.16.2.3	Test coverage	
5.2.16.2.4	Test procedure	
5.2.16.3	Method check(short index)	
5.2.16.3.1	Conformance requirement	
5.2.16.3.2	Test area files	
5.2.16.3.3	Test coverage	
5.2.16.3.4	Test procedure	
5.2.16.4	Method getValue(short indexMSB, short indexLSB)	
5.2.16.4.2	Test area files	
5.2.16.4.3	Test coverage	
5.2.16.4.4	Test procedure	
5.2.16.5	Method copy(short startOffset, byte[] dstBuffer, short dstOffset, short dstLength)	
5.2.16.5.1	Conformance requirement	
5.2.16.5.2	Test area files.	
5.2.16.5.3	Test coverage	
5.2.16.5.4	Test procedure	
5.2.17	Class ToolkitRegistrySystem	
5.2.17.1	Method getEntry	
5.2.17.1.1	Conformance requirement:	
5.2.17.1.2	Test area files	
5.2.17.1.3	Test coverage	
5.2.17.1.4	Test procedure	
5.2.18	Class ToolkitException	
5.2.18.1	ToolkitException Constructor	
5.2.18.1.1	Conformance requirement:	
5.2.18.1.2	Test area files	
2.2.10.1.2	1 000 0100 11100	

5.2.18.1.3	Test coverage	
5.2.18.1.4	Test procedure	
5.2.18.2	Method throwIt	
5.2.18.2.1	Conformance requirement	
5.2.18.2.2	Test area files	
5.2.18.2.3	Test coverage	
5.2.18.2.4	Test procedure	
5.2.18.3	Reason Codes	
5.2.18.3.1	Conformance Requirement	
5.2.18.3.2	Test area files	
5.2.18.3.3	Test Coverage	
5.2.18.3.4	Test Procedure	
5.3	Package uicc.access.fileadministration	
5.3.1 5.3.1.1	Interface AdminFileView	
5.3.1.1	Method createFile(ViewHandler viewHandler)	
5.3.1.1.2	Conformance requirement	
5.3.1.1.2	Test agorge	
5.3.1.1.3	Test coverage Test procedure	
5.3.1.1.4	Method deleteFile(short fid)	
5.3.1.2.1	Conformance requirement	
5.3.1.2.1	Test area files	
5.3.1.2.2	Test coverage	
5.3.1.2.4	Test procedure	
5.3.1.2.4	Method resizeFile(ViewHandler viewHandler)	
5.3.1.3.1	Conformance requirement	
5.3.1.3.1	Test area files	
5.3.1.3.2	Test coverage	
5.3.1.3.4	Test procedure	
5.3.1.4	Method select (byte sfi)	
5.3.1.4.1	Conformance requirement	
5.3.1.4.2	Test area files	
5.3.1.4.3	Test coverage	
5.3.1.4.4	Test procedure	
5.3.1.5	Method select(short fid, byte[] fcp, short fcpOffset, short fcpLength)	
5.3.1.5.1	Conformance requirement	
5.3.1.5.2	Test area files	
5.3.1.5.3	Test coverage	
5.3.1.5.4	Test procedure	
5.3.1.6	Method select (short fid)	
5.3.1.6.1	Conformance requirement	
5.3.1.6.2	Test area files	
5.3.1.6.3	Test coverage	456
5.3.1.6.4	Test procedure	456
5.3.1.7	Method status	457
5.3.1.7.1	Conformance requirement	457
5.3.1.7.2	Test area files	458
5.3.1.7.3	Test coverage	
5.3.1.7.4	Test procedure	
5.3.1.8	Method readBinary	
5.3.1.8.1	Conformance requirement	460
5.3.1.8.2	Test area files	
5.3.1.8.3	Test coverage	
5.3.1.8.4	Test procedure	
5.3.1.9	Method updateBinary	
5.3.1.9.1	Conformance requirement	
5.3.1.9.2	Test area files	
5.3.1.9.3	Test coverage	
5.3.1.9.4	Test procedure	
5.3.1.10	Method readRecord	
5.3.1.10.1	Conformance requirement	
5.3.1.10.2	Test area files	467

5.3.1.10.3		
5.3.1.10.4	I	
5.3.1.11	Method updateRecord	
5.3.1.11.1	1	
5.3.1.11.2		
5.3.1.11.3		
5.3.1.11.4	1	
5.3.1.12	Method searchRecord	
5.3.1.12.1	1	
5.3.1.12.2		
5.3.1.12.3	\mathcal{E}	
5.3.1.12.4	r	
5.3.1.13	Method increase	
5.3.1.13.1	1	
5.3.1.13.2		
5.3.1.13.3	ϵ	
5.3.1.13.4	I	
5.3.1.14	Method deactivateFile	
5.3.1.14.1	- · · · · · · · · · · · · · · · · · · ·	
5.3.1.14.2		
5.3.1.14.3	\mathcal{G}	
5.3.1.14.4	1	
5.3.1.15	Method activateFile	
5.3.1.15.1		
5.3.1.15.2		
5.3.1.15.3	\mathcal{E}	
5.3.1.15.4		
5.3.2	Class AdminFileViewBuilder	
5.3.2.1	Method getTheUICCAdminFileView	
5.3.2.1.1	Conformance requirement	
5.3.2.1.2	Test area files	
5.3.2.1.3	Test coverage	
5.3.2.1.4	Test procedure	
5.3.2.2	Method getTheAdminFileView(javacard.framework.AID aid, byte event)	
5.3.2.2.1 5.3.2.2.2	Conformance requirement:	
5.3.2.2.3	Test coverage	
5.3.2.2.4	Test procedure	
5.3.2.3	Method getTheAdminFileView(byte[] buffer, short bOffset, short bLength, byte event)	
5.3.2.3.1	Conformance requirement:	
5.3.2.3.1	Test area files	
5.3.2.3.3	Test coverage	
5.3.2.3.4	Test procedure	
5.3.3	Class AdminException	
5.3.3.1	Constructor	
5.3.3.1.1	Conformance requirement	
5.3.3.1.2	Test area files	
5.3.3.1.3	Test coverage	
5.3.3.1.4	Test procedure	
5.3.3.2	Method throwIt	
5.3.3.2.1	Conformance requirement	
5.3.3.2.2	Test area files	
5.3.3.2.3	Test coverage	
5.3.3.2.4	Test procedure	
5.3.3.3	Reason Codes	
5.3.3.3.1	Conformance Requirement:	
5.3.3.3.2	Test area files	
5.3.3.3.3	Test Coverage	
5.3.3.3.4	Test Procedure	
5.4	Package uicc.system	
5.4.1	Class HandlerBuilder	
5.4.1.1	Method buildTLVHandler(byte type, short capacity)	

5.4.1.1.1	Conformance requirement	
5.4.1.1.2	Test area files	
5.4.1.1.3	Test coverage	
5.4.1.1.4	Test procedure	
5.4.1.2	Method buildTLVHandler(byte type, short capacity, byte[] buffer , short offset, short length)	
5.4.1.2.1	Conformance requirement	
5.4.1.2.2	Test area files	
5.4.1.2.3	Test coverage	
5.4.1.2.4	Test procedure	
5.4.2	Interface UICCPlatform	
5.4.2.1	Method getTheVolatileByteArray	
5.4.2.1.1	Conformance requirement	
5.4.2.1.2	Test area files	
5.4.2.1.3	Test coverage	
5.4.2.1.4	Test procedure	
5.5	CAT Runtime Environment	
5.5.1	Minimum Handler Availability	
5.5.1.1	ProactiveHandler	
5.5.1.1.1	Conformance requirement	
5.5.1.1.2	Test area files	
5.5.1.1.3	Test coverage	
5.5.1.1.4	Test procedure	
5.5.1.2	ProactiveResponseHandler	
5.5.1.2.1	Conformance requirement	
5.5.1.2.2	Test area files	
5.5.1.2.3	Test coverage	
5.5.1.2.4	Test procedure	
5.5.1.3	EnvelopeHandler	
5.5.1.3.1	Conformance requirement	
5.5.1.3.2	Test area files	
5.5.1.3.3	Test coverage	
5.5.1.3.4	Test procedure	
5.5.1.4	EnvelopeResponseHandler	
5.5.1.4.1	Conformance requirement	
5.5.1.4.2	Test area files	
5.5.1.4.3 5.5.1.4.4	Test coverage	
5.5.2	•	
5.5.2.1	Handler IntegrityProactiveHandler	
5.5.2.1.1	Conformance requirement	
5.5.2.1.2	Test area files	
5.5.2.1.3	Test coverage	
5.5.2.1.4	Test procedure	
5.5.2.2	ProactiveResponseHandler	
5.5.2.2.1	Conformance requirement	
5.5.2.2.2	Test area files	
5.5.2.2.3	Test area mes	
5.5.2.2.4	Test procedure	
5.5.2.3	EnvelopeHandler	
5.5.2.3.1	Conformance requirement	
5.5.2.3.2	Test area files	
5.5.2.3.3	Test coverage	
5.5.2.3.4	Test procedure	
5.5.2.4	EnvelopeResponseHandler	
5.5.2.4.1	Conformance requirement	
5.5.2.4.2	Test area files	
5.5.2.4.3	Test coverage	
5.5.2.4.4	Test procedure	
5.5.3	Applet Triggering	
5.5.3.1	General behaviour	
5.5.3.1.1	Conformance requirement	
5.5.3.1.2	Test area files	

5.5.3.1.3	Test coverage	
5.5.3.1.4	Test procedure	
5.5.3.2	EVENT_PROFILE_DOWNLOAD	601
5.5.3.2.1	Conformance requirement	
5.5.3.2.2	Test area files	602
5.5.3.2.3	Test coverage	602
5.5.3.2.4	Test procedure	602
5.5.3.3	EVENT_MENU_SELECTION	603
5.5.3.3.1	Conformance requirement	603
5.5.3.3.2	Test area files	604
5.5.3.3.3	Test coverage	604
5.5.3.3.4	Test procedure	604
5.5.3.4	EVENT_MENU_SELECTION_HELP_REQUEST	605
5.5.3.4.1	Conformance requirement	605
5.5.3.4.2	Test area files	
5.5.3.4.3	Test coverage	605
5.5.3.4.4	Test procedure	
5.5.3.5	EVENT_CALL_CONTROL_BY_NAA	
5.5.3.5.1	Conformance requirement	
5.5.3.5.2	Test area files	
5.5.3.5.3	Test coverage	
5.5.3.5.4	Test procedure	
5.5.3.6	EVENT_TIMER_EXPIRATION	
5.5.3.6.1	Conformance requirement	
5.5.3.6.2	Test area files	
5.5.3.6.3	Test coverage	
5.5.3.6.4	Test procedure	
5.5.3.7	EVENT_EVENT_DOWNLOAD_MT_CALL	
5.5.3.7.1	Conformance requirement	
5.5.3.7.2	Test area files	
5.5.3.7.3	Test coverage	
5.5.3.7.4	Test procedure	
5.5.3.8	EVENT_EVENT_DOWNLOAD_CALL_CONNECTED	
5.5.3.8.1	Conformance requirement	
5.5.3.8.2	Test area files	
5.5.3.8.3	Test coverage	
5.5.3.8.4	Test procedure	
5.5.3.9	EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED	
5.5.3.9.1	Conformance requirement	
5.5.3.9.2	Test area files	
5.5.3.9.3	Test coverage	
5.5.3.9.4	Test procedure	
5.5.3.10	EVENT_EVENT_DOWNLOAD_LOCATION_STATUS	
5.5.3.10.1	Conformance requirement	
5.5.3.10.2	Test area files	
5.5.3.10.3	Test coverage	
5.5.3.10.4	Test procedure	
5.5.3.11	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY	
5.5.3.11.1	Conformance requirement	
5.5.3.11.2	Test area files	
5.5.3.11.3	Test coverage	
5.5.3.11.4	Test procedure	
5.5.3.12	EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE	
5.5.3.12.1	Conformance requirement	
5.5.3.12.2	Test area files	
5.5.3.12.3	Test coverage	
5.5.3.12.4	Test procedure	
5.5.3.13	EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS	
5.5.3.13.1	Conformance requirement	
5.5.3.13.2	Test area files.	
5.5.3.13.3	Test coverage	
5.5.3.13.4	Test procedure	

5.5.3.14	EVENT_UNRECOGNIZED_ENVELOPE	620
5.5.3.14.1	Conformance requirement	620
5.5.3.14.2	Test area files	620
5.5.3.14.3	Test coverage	620
5.5.3.14.4	Test procedure	
5.5.3.15	EVENT_STATUS_COMMAND	
5.5.3.15.1	Conformance requirement	
5.5.3.15.2	Test area files	
5.5.3.15.3	Test coverage	
5.5.3.15.4	Test procedure	
5.5.3.16	EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION	
5.5.3.16.1	Conformance requirement	
5.5.3.16.2	Test area files	
5.5.3.16.3	Test coverage	
5.5.3.16.4	Test procedure	
5.5.3.17	EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION	
5.5.3.17.1	Conformance requirement	
5.5.3.17.2	Test area files	
5.5.3.17.3	Test coverage	
5.5.3.17.4	Test procedure	
5.5.3.18	EVENT_FIRST_COMMAND_AFTER_ATR	
5.5.3.18.1	Conformance requirement	
5.5.3.18.2	Test area files.	
5.5.3.18.3	Test coverage	
5.5.3.18.4	Test procedure	
5.5.3.19	EVENT_EVENT_DOWNLOAD_DATA_AVAILABLE	
5.5.3.19.1	Conformance requirement	
5.5.3.19.2	Test area files	
5.5.3.19.3	Test coverage	
5.5.3.19.4	Test procedure	
5.5.3.20	EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS	
5.5.3.20.1	Conformance requirement	
5.5.3.20.2	Test area files	
5.5.3.20.3	Test coverage	
5.5.3.20.4	Test procedure	
5.5.3.21	EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHANGE	
5.5.3.21.1	Conformance requirement	
5.5.3.21.2	Test area files.	
5.5.3.21.3	Test coverage	
5.5.3.21.4	Test procedure	
5.5.3.22	EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CHANGED	
5.5.3.22.1	Conformance requirement	
5.5.3.22.2	Test area files.	
5.5.3.22.3	Test coverage	
5.5.3.22.4	Test procedure	
5.5.3.23	EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION	
5.5.3.23.1	Conformance requirement	
5.5.3.23.2	Test area files.	
5.5.3.23.3	Test coverage	
5.5.3.23.4	Test procedure	
5.5.3.24	EVENT_APPLICATION_DESELECT	
5.5.3.24.1	Conformance requirement	
5.5.3.24.2	Test area files.	
5.5.3.24.2	Test coverage	
5.5.3.24.4	Test procedure	
5.5.3.25	EVENT_PROACTIVE_HANDLER_AVAILABLE	
5.5.3.25.1	Conformance requirement	
5.5.3.25.1	Test area files.	
5.5.3.25.3	Test coverage	
5.5.3.25.4	Test procedure	
5.5.3.26	EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_CHANGE	
5.5.3.20	Conformance requirement	0 44 644

5.5.3.26.2	Test area files	644
5.5.3.26.3	Test coverage	644
5.5.3.26.4	Test procedure	645
5.5.3.27	EVENT_EVENT_DOWNLOAD_BROWSING_STATUS	645
5.5.3.27.1	Conformance requirement	645
5.5.3.27.2	Test area files	646
5.5.3.27.3	Test coverage	646
5.5.3.27.4	Test procedure	646
5.5.3.28	EVENT_EXTERNAL_FILE_UPDATE	647
5.5.3.28.1	Conformance requirement	647
5.5.3.28.2	Test area files	
5.5.3.28.3	Test coverage	
5.5.3.28.4	Test procedure	
5.5.4	Proactive Command Sending by the CAT Runtime Environment	
5.5.4.1	System Proactive Commands	
5.5.4.1.1	Conformance requirement	
5.5.4.1.2	Test area files	
5.5.4.1.3	Test coverage	
5.5.4.1.4	Test procedure	
5.5.4.2	Interaction with GSM commands	
5.5.4.2.1	Conformance requirement	
5.5.4.2.2	Test area files	
5.5.4.2.3 5.5.4.2.4	Test coverage	
5.5.4.3	Proactive Command Control	
5.5.4.3.1	Conformance requirement	
5.5.4.3.2	Test area files.	
5.5.4.3.3	Test coverage	
5.5.4.3.4	Test procedure	
5.5.5	Exception Handling	
5.5.5.1	General Behaviour	
5.5.5.1.1	Conformance requirement	
5.5.5.1.2	Test area files	662
5.5.5.1.3	Test coverage	662
5.5.5.1.4	Test procedure	662
5.5.5.2	Interaction with Multiple Triggering	
5.5.5.2.1	Conformance requirement	
5.5.5.2.2	Test area files	
5.5.5.2.3	Test coverage	
5.5.5.2.4	Test procedure	
5.5.6	Envelope Response Posting	
5.5.6.1	General Behaviour	
5.5.6.1.1 5.5.6.1.2	Conformance requirement Test area files	
5.5.6.1.3	Test coverage	
5.5.6.1.4	Test coverage	
5.5.6.2	EVENT_CALL_CONTROL_BY_NAA	
5.5.6.2.1	Conformance requirement	
5.5.6.2.2	Test area files	
5.5.6.2.3	Test coverage	
5.5.6.2.4	Test procedure	
5.5.6.3	EVENT_UNRECOGNIZED_ENVELOPE	
5.5.6.3.1	Conformance requirement	
5.5.6.3.2	Test area files.	667
5.5.6.3.3	Test coverage	
5.5.6.3.4	Test procedure	
5.5.7	Toolkit Installation	
5.5.7.1	General Behaviour	
5.5.7.1.1	Conformance requirement	
5.5.7.1.2	Test aggregation	
5.5.7.1.3 5.5.7.1.4	Test procedure	668

5.5.7.2	Timers Allocation	668
5.5.7.2.1	Conformance requirement	668
5.5.7.2.2	Test area files	669
5.5.7.2.3	Test coverage	669
5.5.7.2.4	Test procedure	669
5.5.7.3	Item Identifier	670
5.5.7.3.1	Conformance requirement	670
5.5.7.3.2	Test area files	670
5.5.7.3.3	Test coverage	670
5.5.7.3.4	Test procedure	671
5.5.7.4	Item Position	672
5.5.7.4.1	Conformance requirement	672
5.5.7.4.2	Test area files	672
5.5.7.4.3	Test coverage	673
5.5.7.4.4	Test procedure	673
5.5.7.5	Maximum Text Length for a menu entry	676
5.5.7.5.1	Conformance requirement	676
5.5.7.5.2	Test area files	677
5.5.7.5.3	Test coverage	677
5.5.7.5.4	Test procedure	677
5.5.7.6	Maximum number of menu entries	678
5.5.7.6.1	Conformance requirement	678
5.5.7.6.2	Test area files	
5.5.7.6.3	Test coverage	678
5.5.7.6.4	Test procedure	679
5.5.7.7	Access Domain	679
5.5.7.7.1	Conformance requirement	679
5.5.7.7.2	Test area files	
5.5.7.7.3	Test coverage	681
5.5.7.7.4	Test procedure	681
5.5.7.8	Priority Level	
5.5.7.8.1	Conformance requirement	
5.5.7.8.2	Test area files	
5.5.7.8.3	Test coverage	
5.5.7.8.4	Test procedure	
5.5.7.9	Channel Allocation	
5.5.7.9.1	Conformance requirement	
5.5.7.9.2	Test area files	
5.5.7.9.3	Test coverage	
5.5.7.9.4	Test procedure	
5.5.7.10	Minimum Security Level	
5.5.7.10.1	Conformance requirement	
5.5.7.10.2	Test area files	
5.5.7.10.3	Test coverage	
5.5.7.10.4	Test procedure	
5.5.7.11	TAR Value(s) of the Toolkit Application instance	
5.5.7.11.1	Conformance requirement	
5.5.7.11.2	Test area files	
5.5.7.11.3	Test coverage	
5.5.7.11.4	Test procedure	
5.5.7.12	Services Allocation	
5.5.7.12.1	Conformance requirement	
5.5.7.12.2	Test aggregation	
5.5.7.12.3	Test procedure	
5.5.7.12.4	Test procedure	
5.5.8	UICC File Access	
5.5.8.1	FileView	
5.5.8.1.1	Conformance requirement	
5.5.8.1.2	Test governge	
5.5.8.1.3	Test procedure	
5.5.8.1.4 5.5.8.2	Test procedure	703

Annex A (normative):

5.5.9	Other parts transferred to framework from API	703
5.5.9.1	A handler is a temporary JCRE Entry Point object	703
5.5.9.1.1	Conformance requirement	703
5.5.9.1.2	Test area files	704
5.5.9.1.3	Test coverage	704
5.5.9.1.4	Test procedure	
5.5.9.2	Transaction	
5.5.9.2.1	Conformance requirement	
5.5.9.2.2	Test area files	
5.5.9.2.3	Test coverage	
5.5.9.2.4	Test procedure	
5.5.9.3	Timer Id between Applets	
5.5.9.3.1	Conformance requirement	
5.5.9.3.2	Test area files.	
5.5.9.3.3	Test coverage	
5.5.9.3.4	Test procedure	
5.5.10	Registration	
5.5.10.1	Event registration	
5.5.10.1	Conformance requirement	
5.5.10.1.2	Test area files	
5.5.10.1.3	Test coverage	
5.5.10.1.4	Test procedure	
5.5.11	UICC Toolkit Applet	
5.5.11.1	Data and function sharing	
5.5.11.1.3	Test coverage	
5.5.11.1.4	Test procedure	
5.5.11.2	Package deletion	
5.5.11.2.1	Conformance requirement	
5.5.11.2.2	Test area files	
5.5.11.2.3	Test coverage	
5.5.11.2.4	Test procedure	
5.5.11.3	Applet deletion	
5.5.11.3.1	Conformance requirement	
5.5.11.3.2	Test area files	
5.5.11.3.3	Test coverage	712
5.5.11.2.4	Test procedure	713
5.5.11.4	Object deletion	715
5.5.11.4.1	Conformance requirement	715
5.5.11.4.2	Test area files	715
5.5.11.4.3	Test coverage	715
5.5.11.4.4	Test procedure	715
5.5.12	Proactive Command Handling	716
5.5.12.1	General behaviour	
5.5.12.1.1	Conformance requirement	
5.5.12.1.2	Test area files	
5.5.12.1.3	Test coverage	
5.5.12.1.4	Test procedure	
5.5.13	CAT Runtime Environment behaviour	
5.5.13.1	Context	
5.5.13.1.1	Conformance requirement	
5.5.13.1.2	Test area files.	
5.5.13.1.3	Test coverage	
5.5.13.1.4	Test procedure	
5.5.14	UICC and ADF File System Administration API	
5.5.14.1	AdminFile View	
5.5.14.1.1	Conformance requirement	
5.5.14.1.1	Test area files	
5.5.14.1.2		
	Test precedure	
5.5.14.1.4 5.5.14.2	Test procedure	
5.5.14.2	AUIIIIII TIC ACCESS	/18

Class and methods acronyms......719

	uicc.access package	
A.1.1	FileView methods	
A.1.2	UICCConstants	719
A.1.3	UICCSystem methods	719
A.1.4	UICCException methods	720
A.2	uicc.toolkit package	720
A.2.1	BERTLVEditHandler methods	
A.2.2	BERTLVViewHandler methods	
A.2.3	EditHandler methods	
A.2.4	EnvelopeHandler methods	
A.2.5	EnvelopeResponseHandler methods	
A.2.6	ProactiveHandler methods	
A.2.7	ProactiveResponseHandler methods	
A.2.8	ToolkitConstants methods	
A.2.9	ToolkitInterface methods	
A.2.10	ToolkitRegistry methods	
A.2.11	ViewHandler methods	
A.2.12	EnvelopeHandlerSystem methods	
A.2.12	EnvelopeResponseHandlerSystem methods	
A.2.14	ProactiveHandlerSystem methods	
A.2.14	ProactiveResponseHandlerSystem methods	
A.2.16	TerminalProfile methods	
A.2.17	ToolkitRegistrySystem methods	
A.2.17	ToolkitException methods	
	•	
A.3	uicc.system package	726
A.3.1	BERTLVEditHandler methods	726
A.3.2	UICCPlatform methods	726
A.4	uicc.access.fileadministration package	726
A.4.1	AdminFileView methods	
A.4.1 A.4.2	AdminFileViewBuilder methods	
A.4.2 A.4.3		
	AdminException methods	
A.5	Acronyms for CAT Runtime Environment tests	
A.5.1	Minimum handler availability	727
A.5.2	Handler integrity	727
A.5.3	Applet triggering	728
A.5.4	Proactive command sending by the CAT Runtime Environment	728
A.5.5	Exception handling	728
A.5.6	Envelope response posting	728
A.5.7	Toolkit installation	729
A.5.8	UICC file access	729
A.5.9	Other parts transferred from API to CAT RE	729
A.5.10	Registration	729
A.5.11	UICC toolkit applet	729
A.5.12	Proactive command handling	729
A.5.13	CAT Runtime Environment behaviour	730
Anna-	B (normative): Global prepersonalization	7 21
B.1	UICC file system server mandatory pre-personalization	734
B.2	UICC file system server test default pre-personalization	735
B.2.1	EF _{UICC} (UICC Test EF)	
B.2.2	EF _{ARR} (UICC Test Access Rules EF)	
B.2.2	DF _{TEST} (UICC Access Tests DF)	
B.2.3.1		
B.2.3.1 B.2.3.2	······ / 1	
B.2.3.2 B.2.3.3	1 /	
B.2.3.4	1 /	
B.2.3.5		
B 2 3 6	· · · · · · · · · · · · · · · · · · ·	738

B.2.3.7	EF _{CNDE} (Cyclic Never Deactivate)	
B.2.3.8	EF _{CNAC} (Cyclic Never Activate)	739
B.2.3.9	EF _{CARU} (Cyclic Always Read and Update)	
B.2.3.10	EM (
B.2.3.11		
B.2.3.12		
B.2.3.13	CIVA (-) / /	
B.2.3.14		
B.2.3.15		
B.2.3.16	cine ()	
B.2.3.17	/ / ·	
B.2.3.18		
B.2.3.19		744
B.2.3.20		
B.2.3.21	· · · · · · · · · · · · · · · · · · ·	
B.2.3.22	/ / · · · · · · · · · · · · · · · · · ·	
B.2.3.23	Zateri (
B.2.3.24	zere (
B.2.3.25		
B.2.3.26		
B.2.3.27	, , , , , , , , , , , , , , , , , , ,	
B.2.3.28		
B.2.3.29	= - 1 Licht (=)	
B.2.3.30		
B.2.3.31	Li III (
B.2.3.32		
B.2.3.33		
B.2.3.34	Linux (
B.2.3.35	, , , , , , , , , , , , , , , , , , ,	
B.2.3.36 B.2.3.37	············· /	
	mucs (1	
B.2.3.38	,	
B.2.3.39 B.2.3.40	,	
B.2.3.40 B.2.3.41		
B.2.3.41	· ·	
B.2.3.42 B.2.3.43		
B.2.3.44		
B.2.3.45		
B.2.3.46		
B.2.3.47		
B.2.3.47	DF SUB_TEST (Test DF under DF TEST)	
B.2.4.1	EF _{TAA} (Test EF)	
B.2.5	DF _{ARR1} (DF Access Rule Reference 1)	
B.2.5.1	EF _{TARIT} (Transparent Access Rule 1 Test EF)	
B.2.6	DF _{ARR2} (DF Access Rule Reference 2)	
B.2.6.1	EF _{TAR2T} (Transparent Access Rule 2 Test EF)	
B.2.7	DF _{ARR3} (DF Access Rule Reference 3)	
B.2.7.1	EF _{TAR3T} (Transparent Access Rule 3 Test EF)	
B.2.8	DF _{ARR4} (DF Access Rule Reference 4)	
B.2.8.1	EF _{TAR4T} (Transparent Access Rule 4 Test EF)	
B.2.9	DF _{ARR5} (DF Access Rule Reference 5)	
B.2.9.1	EF _{TAR5T} (Transparent Access Rule 5 Test EF)	
	•	
	First application dedicated files system ADF1	
B.3.1	DF _{TELECOM}	
B.3.4.1	EF _{SUME} (EF SetUpMenu)	
B.3.4.2	EF _{ARR} (UICC Test Access Rules EF)	758
B.4 S	Second application dedicated files system ADF2	759
B.4.1	EF _{UICC} (UICC Test EF)	
B 4 2	DETECT (1st Test DF under ADF2)	750

B.4.2.1 DF _{SUB_TEST} (1 st DF under DF_TEST) B.4.2.1.1 EF _{TAA} (Test EF) B.4.3 DF _{ADF2} (2 nd Test DF under ADF2)				
Annex C (normative):	Test file description	761		
Annex D (normative):	uicc.test.util package, Uicc interfaces and testing script example	762		
Annex E (normative):	Test Area files	763		
Annex F (informative):	Bibliography	764		
Annex G (informative):	Change history	765		
History		766		

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (http://webapp.etsi.org/IPR/home.asp).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This Technical Specification (TS) has been produced by ETSI Project Smart Card Platform (SCP).

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

Version x.y.z

where:

- x the first digit:
 - 1 presented to TC SCP for information;
 - 2 presented to TC SCP for approval;
 - 3 or greater indicates TC SCP approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

Modal verbs terminology

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

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

1 Scope

The present document covers the minimum characteristics considered necessary in order to provide compliance to ETSI TS 102 241 [9].

It describes the technical characteristics and methods for testing the UICC API for Java CardTM (ETSI TS 102 241 [9]) implemented in a UICC Platform. It specifies the following parts:

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

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

• In the case of a reference to a TC SCP document, a non specific reference implicitly refers to the latest version of that document in the same Release as the present document.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are necessary for the application of the present document.

[1]	Sun Microsystems Java Card ^{1M} Specification: "Java Card ^{1M} 2.2.2 Application Programming
	Interface".

- [2] Sun Microsystems Java CardTM Specification: "Java CardTM 2.2.2 Runtime Environment (JCRE) Specification".
- [3] Sun Microsystems Java CardTM Specification: "Java CardTM 2.2.2 Virtual Machine Specification".

NOTE: SUN Java Card Specifications can be downloaded at http://www.oracle.com/technetwork/java/javame/javacard/download/overview/index.html

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

[5] ETSI TS 102 221: "Smart cards; UICC-Terminal interface; Physical and logical characteristics".

[6]	ETSI TS 102 223: "Smart cards; Card Application Toolkit (CAT)".
[7]	ETSI TS 102 222: "Integrated Circuit Cards (ICC); Administrative commands for telecommunications applications".
[8]	ETSI TS 102 226: "Smart Cards; Remote APDU structure for UICC based applications".
[9]	ETSI TS 102 241: "Smart Cards; UICC Application Programming Interface (UICC API) for Java Card (TM)".
[10]	ETSI TS 123 040: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Technical realization of Short Message Service (SMS) (3GPP TS 23.040)".
[11]	ETSI TS 101 267: "Digital cellular telecommunications system (Phase 2+); Specification of the SIM Application Toolkit for the Subscriber Identity Module - Mobile Equipment (SIM-ME) interface (3GPP TS 11.14)".
[12]	ETSI TS 131 213: "Universal Mobile Telecommunications System (UMTS); LTE; Test specification for (U)SIM; Application Programming Interface (API) for Java Card TM (3GPP TS 31.213)".

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

• In the case of a reference to a TC SCP document, a non specific reference implicitly refers to the latest version of that document in the same Release as the present document.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

Not applicable.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

applet installation parameters: values for applet installation parameters

Conformance Requirement Reference (CRR): description of the expected card behaviour according to ETSI TS 102 241 [9]

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

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

test area: set of Test Cases applicable to a specific part (class method, CAT RE behaviour, etc.) of the ETSI TS 102 241 [9]

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

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

test source file: java file containing methods that will load and install test applet in the card, execute and verify the test results, and restore the Default Initial Conditions on the UICC (when possible)

test toolkit applet: applet designed to test a specific functionality of the UICC API (ETSI TS 102 241 [9])

3.2 **Abbreviations**

For the purposes of the present document, the following abbreviations apply:

ADF Application Dedicated File AID **Application IDentifier**

APDU Application Protocol Data Unit API **Application Programming Interface**

Access Rule Reference ARR Answer To Reset **ATR BER Basic Encoding Rules** CAP Converted Applet

CARU Cyclic Always Read and Update Card Application Toolkit CAT

Card Application Toolkit Runtime Environment CAT RE

Comprehension Required CR **CRE CAT Runtime Environment**

Conformance Requirements Reference **CRR**

CRRC Conformance Requirement Reference Context Error Conformance Requirement Reference Normal **CRRN** Conformance Requirement Reference Parameter Error

CRRP

Data Coding Scheme DCS Dedicated File DF DIR **DIRectory** EF Elementary File **FCP** File Control Parameters

File IDentifier FID

Global System for Mobile communications **GSM** Integrated Circuit Card IDentification **ICCID** Java CardTM Runtime Environment **JCRE** LCSI Life Cycle Status Information

ME Mobile Equipment MF Master File

MSL Minimum Security Level Mobile Terminated MT

NAA **Network Access Application**

NOK Not OK

PIN Personal Identification Number

PLPreferred Languages

RAPDU Response Application Protocol Data Unit

RFU Reserved for Future Use **SDK** Software Development Kit SE Security Environment Short File Identifier SFI STK SIM ToolKit SWStatus Word

TAR Toolkit Application Reference Transparent Always Read and Update **TARU**

Tag Length Value TLV Transfer layer Protocol TP

4 Test environment

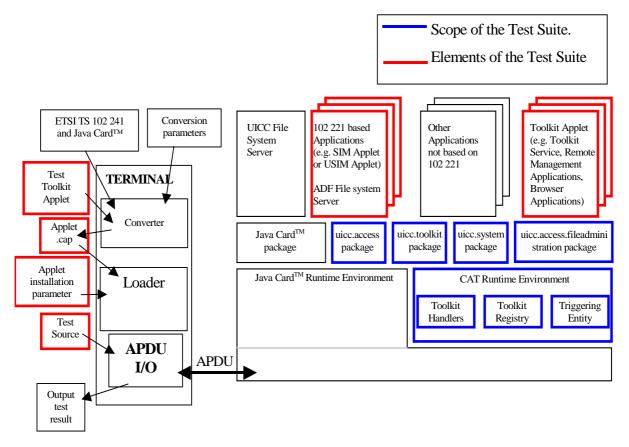
This clause specifies requirements that shall be met and the testing rules that shall be followed, during the test procedure.

4.1 Applicability

The test defined in the present document are applicable to cards implementing ETSI TS 102 241 [9] unless otherwise stated.

4.2 Test environment description

The general architecture for the test environment is:



NOTE: Figure 4.2 shows the test architecture required to test interoperability at both API and bytcode level. The latter is currently not included in the current specification. The diagram is for information.

Figure 4.2

4.3 Tests format

4.3.1 Test area reference

Each test area is referenced as follows:

API Testing: 'Api_[package name]_[class name]_[method name]' where:

• package name:

- uicc.access package: '1'.
- uicc.toolkit package: '2'.
- uicc.system package: '3'.
- uicc.access.fileadministration: '4'.
- class/interface name:
 - yyy: 3 letters for each class.

NOTE 1: See annex A for full classes acronyms list.

- method name:
 - zzzz[input parameters].

NOTE 2: See annex A for full methods name acronyms list.

CRE: Cat Runtime Environment testing: 'Cre_[Clause name]_[Subclause name]':

- Clause name:
 - xxx: 3 letters for each clause

NOTE 3: See annex A for full clause acronyms list.

- Subclause name
 - yyyy: : 4 letters for each subclause

NOTE 4: See annex A for full subclause acronyms list.

4.3.1.1 Conformance requirements

The conformance requirements are expressed in the following way:

- Method prototype as listed in ETSI TS 102 241 [9].
- Normal execution:
 - Contains normal execution and correct parameters limit values, each referenced as a Conformance Requirement Reference Normal (CRRN).
- Parameter errors:
 - Contains parameter errors and incorrect parameter limit values, each referenced as a Conformance Requirement Reference Parameter Error (CRRP).
- Context errors:
 - Contains errors due to the context the method is used in, each referenced as a Conformance Requirement Reference Context Error (CRRC).

4.3.1.2 Test area files

The files included in the Test Area use the following naming convention:

- Test Source: Test_[Test Area Reference].java.
- Test Applet: [Test Area Reference]_[Test applet number].java.
- Cap File: [Test Area Reference].cap.

The applet numbers start from '1'.

The test source shall use common interfaces defined in annex D.

The Cap File format is described in Java CardTM Virtual Machine Specification [3].

Test files can be run in any order.

All files from the same test area are located in the same subfolder.

4.3.1.3 Test coverage

The table above each test procedure indicates the correspondence between the Conformance Requirements Reference (CRR) and the different test cases.

4.3.1.4 Test procedure

Each test procedure contains a table to indicate the expected responses from the API and/or the APDU level as follows:

Test Case					
ld	Description	API/CAT RE Expectation	APDU Expectation		
	Test Case detailed description	API and/or CAT RE expected behaviour.	Expected response at APDU level.		

4.4 Initial conditions

The Initial Conditions are a set of general prerequisites for the UICC prior to the execution of testing. For each test procedure described in the present document, the following rules apply to the Initial Conditions:

- unless otherwise stated, the file system and the files' content shall fulfil the requirements described in annex B;
- unless otherwise stated, before installing the applet(s) relevant to the current test procedure, all packages specific to other test procedures shall not be present.

When both statements apply, a test procedure is said to be in the "Default Initial Conditions" state.

4.5 Package name

Java packages integrating this Test Suite shall follow this naming convention:

uicc.test.access.[Test Area Reference]: Java Card packages containing Test Area References for the ETSI TS 102 241 [9] uicc.access package.

uicc.test.system.[Test Area Reference]: Java Card packages containing Test Area References for the ETSI TS 102 241 [9] uicc.system package.

uicc.test.toolkit.[Test Area Reference]: Java Card packages containing Test Area References for the ETSI TS 102 241 [9] uicc.toolkit package.

uicc.test.access.fileadministration.[Test Area Reference]: Java Card packages containing Test Area References for the ETSI TS 102 241 [9] uicc.access.fileadministration package.

uicc.test.catre.[Test Area Reference]: Java Card packages containing Test Area References for the ETSI TS 102 241 [9] CAT Runtime Environment.

uicc.test.util: for the Test util package defined in this Test Suite.

where the Test Area Reference is written in lower case.

EXAMPLE: The package ../uicc.test.access.[Test Area Reference] creates the following directory structure ../uicc/test/access/[Test Area Reference]/Api_1_..._[1..n].*, where 'Api_1_..._[1..n].*' are the different test applets Java source files used in [Test Area Reference].

4.6 AID Coding

The AID coding for the Test Packages, Applet classes and Applets shall be as specified in ETSI TS 101 220 [4]. In addition, the following TAR and Application Provider specific data values are defined for use within the present document:

AID coding

Byte 1	<u> </u>	Byte 12	Byte 13	Byte 14	Byte 15	Byte 16	
							Application Provider specific data
							TAR
							Specified in TS 101 220 [4]

TAR Coding (3 bytes/ 24 bits):

b1 b4	b5 t	8 b9 b1	2 b13 b16 b1	7 b24
				Applet instance number
				Applet class number
				Package number
				RFU
	'			Test Part Identifier

Applet instance number, Applet Class number, Package number:

- For package AID, package number shall start from 0 and class and instance numbers shall be 0.
- For class AID, package number is the number of the class package, class number shall start from 1 and instance shall be 0.
- For instance AID, package and class number are the number of class and package of which instance belongs, and instance number shall start from 1.

Test part Identifier (bits b1-b4):

- 0000 reserved (as TAR= '00.00.00' is reserved for Issuer Security Domain).
- 0001 API uicc.access.
- 0010 API uicc.toolkit.
- 0011 API uicc.system.
- 0100 API uicc.access.fileadministration.
- 0101 CAT RE.
- 1101 ADF2.
- 1110 ADF1.
- 1111 uicc.util.
- other values are RFU.

Application Provider specific data (1 byte):

- '00' for Package.
- '01' for Applet class.
- '02' for Applet Instance.

EXAMPLE: The AID of Package uicc.util is 'A0 00 00 00 09 00 05 FF FF FF FF 89 F0 00 00 00'.

4.7 Test equipment

These clauses recommend a minimum specification for each of the items of test equipment referenced in the tests.

4.7.1 Test tool

This test tool shall meet the following requirements:

- be able to send and receive APDU command to the UICC;
- the result of the I/O commands must be presented at the application layer;
- be able to provide results of the tests;
- shall send and/or compare all data specified in test file.

4.7.2 Interfaces and classes use

The test tool shall use some interfaces and classes, defined in annex D. They define the only allowed methods to write the test sources.

Interfaces and classes are defined as follow:

- UiccAdministrativeCommandsService defines administrative methods from ETSI TS 102 222 [7];
- UiccApplicationManagementService defines methods to load, install, select and delete applications;
- UiccCardManagementService defines methods to manage the card and its files;
- UiccToolkitService defines methods to manage toolkit commands;
- APDUResponse defines method to retrieve and check status words and data received from the card;
- UiccAPITestCardService defines the static method to get a reference of the class implementing all interfaces;
- UiccTestModel is an abstract class which shall be extended by every test source class; it defines the entry point run() method of the test script.

4.7.3 Util package

Annex D includes java source code of TestToolkitApplet abstract class of the uicc.util package. Each test applet shall extend this abstract class in order to retrieve test results when selecting it.

4.7.4 Java Software Development kit version

Java software development kit (SDK) version supported by JavaCard 2.2.2 specifications ([1], [2], [3]) is 1.4.1.

5 Test plan

5.1 Package uicc.access

5.1.1 Interface FileView

5.1.1.1 Method activateFile

Test Area Reference: Api_1_Fvw_Actf

5.1.1.1.1 Conformance requirement

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

5.1.1.1.1 Normal execution

• CRRN1: The currently selected EF of the calling applet shall be activated, as defined in ETSI TS 102 222 [7].

5.1.1.1.2 Parameter errors

No requirements.

5.1.1.1.3 Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.NO_EF_SELECTED.
- CRRC2: If the calling applet does not fulfil the access condition, activate, to perform this function, an instance of UICCException shall be thrown. The reason code shall be UICCException.SECURITY_STATUS_NOT_SATISFIED.
- CRRC3: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.1.1.1.2 Test area files

Test Source: Test_Api_1_Fvw_Actf.java.

Test Applet: Api_1_Fvw_Actf_1.java.

Cap File: api_1_fvw_actf.cap.

5.1.1.3 Test coverage

CRR number	Test case number
N1	2,3
C1	1
C2	4
C3	Not testable

5.1.1.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Test applet is installed with no access		
	right on Application Pin2		
1	No EF is selected		
	1- Select DF _{TEST} fid=1111	2- A UICCException	
	2- Call activateFile()	NO_EF_SELECTED is	
		thrown	
2	Activate deactivated File	l l l l l l l l l l l l l l l l l l l	
-	Activate deactivated File		
	0- Select Root directory		
	1- Select EFucc fid=2FFF		
	2- ReadBinary EF _{UICC}		
	3- Deactivate EFunc	2- No Exception shall be	
	4- ReadBinary EF _{UICC}	thrown	
	2 3333	4-	
	5 -ActivateFile EF _{UICC}	UICCException.REF_DATA_	
	6- ReadBinary EF _{UICC}	INVALIDATED is thrown	
		6- No Exception shall be	
		thrown	
3	Activate activated File		
		No Exception shall be thrown	
	ActiveFile EFurce	The Exception snames another	
4	Access condition not fulfilled		
	1- Select DF _{TEST} fid=1111		
	2- Select EF _{LADA} fid=6F15	3- A UICCException	
	3- ActivateFile EF _{LADA}	SECURITY_STATUS_NOT_	
		SATISFIED is thrown	

5.1.1.2 Method deactivateFile

Test Area Reference: Api_1_Fvw_Dacf.

5.1.1.2.1 Conformance requirement

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

5.1.1.2.1.1 Normal execution

• CRRN1: The currently selected EF of the calling applet shall be deactivated, as defined in ETSI TS 102 222 [7].

5.1.1.2.1.2 Parameter errors

No requirements.

5.1.1.2.1.3 Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.NO_EF_SELECTED.
- CRRC2: If the calling applet does not fulfil the access condition, activate, to perform this function, an instance of UICCException shall be thrown. The reason code shall be UICCException.SECURITY_STATUS_NOT_SATISFIED.
- CCRC3: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.1.1.2.2 Test area files

 $Test\ Source: \qquad Test_Api_1_Fvw_Dacf.java.$

Test Applet: Api_1_Fvw_Dacf_1.java.

Cap File: api_1_fvw_dacf.cap.

5.1.1.2.3 Test coverage

CRR number	Test case number
N1	2,3
C1	1
C2	4
C3	Not testable

5.1.1.2.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Test applet is installed with no access		
	right on Application Pin2		
1	No EF is selected		
	1- select DF _{TEST} fid=1111 2- call deactivateFile()	2- An UICCException NO_EF_SELECTED is thrown	
2	Deactivate activated File		
	0- Select root directory 1- Select EF _{UICC} fid=2FFF 2- ReadBinary EF _{UICC} 3- Deactivate EF _{UICC} 4- ReadBinary EF _{UICC}	2- No Exception shall be thrown 4- UICCException.REF_DATA_INVALIDATED is thrown	
3	Deactivate deactivated File		
	1- deactivateFile EF _{UCC}	A No Essentian aballiba	
	2- activateFile EF _{UICC}	1- No Exception shall be thrown	
		linown	
4	Access condition not fulfilled		
	1- select DF _{TEST} fid=1111 2- select EF _{LADA} fid=6F15 3- deactivateFile EF _{LADA}	3- An UICCException SECURITY_STATUS_NOT_ SATISFIED is thrown	

5.1.1.3 Method increase

Test Area Reference: Api_1_Fvw_Incr.

5.1.1.3.1 Conformance requirement

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

5.1.1.3.1.1 Normal execution

- CRRN1: This method increases the current cyclic EF record.
- CRRN2: The response buffer will only contain the value of the increased record.

5.1.1.3.1.2 Parameter errors

- CRRP1: If the array incr is null, an instance of NullPointerException shall be thrown.
- CRRP2: If the array resp is null, an instance of NullPointerException shall be thrown.
- CRRP3: If incrOffset is negative, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP4: If incrLength is negative, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP5: If respOffset is negative, an instance of ArrayIndexOutOfBoundsExceptoin shall be thrown.
- CRRP6: If incrOffset plus incrLength, is greater than the length of array incr, an instance of ArrayIndexOutOfBoundsException shall be thrown and no increase is performed.
- CRRP7: If respOffset is greater than the length of array resp, an instance of ArrayIndexOutOfboundsException shall be thrown.
- CRRP8: 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 UICCException shall be thrown. The reason code shall be UICCException.MAX_VALUE_REACHED.
- CRRP9: If incrLength is greater than 127, and exception shall be thrown.

5.1.1.3.1.3 Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.NO_EF_SELECTED.
- CRRC2: If the method call causes a memory problem (e.g. memory access error), an instance of UICCException shall be thrown. The reason code shall be UICCException.MEMORY_PROBLEM.
- CRRC3: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.
- CRRC4: If increase not allowed as indicated by the File descriptor byte of the File Descriptor (ETSI TS 102.221 [5] Response for an EF), or the file is not a cyclic one, an instance of the UICCException shall be thrown. The reason code shall be UICCException.COMMAND_INCOMPATIBLE.
- CRRC5: If the calling applet does not fulfil the access condition, INCREASE, to perform this function, an
 instance of UICCException shall be thrown. The reason code shall be
 UICCException.SECURITY_STATUS_NOT_SATISFIED.
- CRRC6: If the currently selected EF is invalidated, an instance of UICCException shall be thrown. The reason code shall be UICCException.REF_DATA_INVALIDATED.

• CRRC7: If the currently selected cyclic EF has no record, an instance of UICCException shall be thrown. The reason code shall be UICCException. RECORD_NOT_FOUND.

5.1.1.3.2 Test area files

Test Source: Test_Api_1_Fvw_Incr.java.

Test Applet: Api_1_Fvw_Incr_1.java.

Cap File: api_1_fvw_incr.cap.

5.1.1.3.3 Test coverage

CRR number	Test case number
N1	1, 2, 3, 16
N2	2, 3, 16
P1	4
P2	9
P3	6
P4	5
P5	10
P6	7
P7	11
P8	8
P9	16
C1	1
C2	Not testable
C3	Not testable
C4	12
C5	13
C6	14
C7	15

5.1.1.3.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	No EF selected 1- select DF _{TEST} fid=1111 2- byte[] incr = new byte[4]	2- An UICCException.NO_EF_SEL	
	<pre>byte[] resp = new byte[4] incrOffset = 0 incrLength = 2 respOffset = 0 increase()</pre>	ECTED should be thrown	
2	<pre>increase, verify response 1- select EF_{CARU}, fid=6F09 set the record pointer with readRecord() in PREVIOUS mode 2-//Set both record to 00 00 00 mode = REC_ACC_MODE_PREVIOUS data[] = {0x00,0x00,0x00} recOffset = 0 dataOffset = 0 dataLength = 3 updateRecord() //update Record 1 updateRecord() //update Record 2 3- incr[] = {0x00,0x00,0x01} incrOffset = 0 incrLength = 3 resp.length = 4 respOffset = 0 ret = 3 increase()</pre>	3- resp[] = {0x00,0x00,0x01,0x00}	

ld	Description	API Expectation	APDU Expectation
3	increase, verify file	74 1 Expediation	711 DO EXPONICION
	<pre>1- incr[] = {0x00,0x00,0x00,0x02} incrOffset = 1 incrLength = 3 resp.length = 4 respOffset = 1 increase()</pre>	1- resp[] = {0x00,0x00,0x00,0x03}	
	<pre>2- resp[] = {0x00,0x00,0x00,0x00} recNumber = 0 mode = REC_ACC_MODE_ABSOLUTE_CURRENT recOffset = 0 resp.length = 4 respOffset = 0 respLength = 3 readRecord()</pre>	2- resp[] = {0x00,0x00,0x03,0x00}	
4	incr[] is null		
	<pre>incr[] = null incrOffset = 0 incrLength = 1 resp.length = 4 respOffset = 0 increase()</pre>	Shall throw java.lang.NullPointerException.	
5	incrLength< 0		
	<pre>incr.length = 4 incrOffset = 0 incrLength = -1 resp.length = 4 respOffset = 0 increase()</pre>	Shall throw java.lang. ArrayIndexOutOfBoundsExc eption.	
6	incrOffset < 0		
	<pre>incr.length = 4 incrOffset = -1 incrLength = 1 resp.length = 4 respOffset = 0 increase()</pre>	Shall throw java.lang. ArrayIndexOutOfBoundsExc eption.	
7	IncrOffset + incrLength > incr.length		
	<pre>incr.length = 4 incrOffset = 1 incLength = 4resp.length = 4 respOffset = 0 increase()</pre>	Shall throw java.lang. ArrayIndexOutOfBoundsExc eption.	
8	Reach Maximum Value		
	<pre>1- incr[0:3] = 0xFF incrOffset = 0 incrLength = 3 resp.length = 4 respOffset = 0 increase()</pre>	1- Shall throw uicc.access.UICCException with reason code MAX_VALUE_REACHED.	
	<pre>2- //Set both record to FF FF mode = REC_ACC_MODE_PREVIOUS data[] = {0xFF,0xFF,0xFF} recOffset = 0 dataOffset = 0 dataLength = 3 updateRecord() //update Record 1 updateRecord() //update Record 2 3- incr[] = {0x00,0x00,0x01} incrOffset = 0 incrLength = 3</pre>	2- Shall throw uicc.access.UICCException with reason code MAX_VALUE_REACHED.	
	<pre>resp.length = 4 respOffset = 0 increase()</pre>		

ld	Description	API Expectation	APDU Expectation
9	resp[] is null		
	incr.length = 4	Shall throw	
	incrOffset = 0	java.lang.	
	<pre>incrLength = 1 resp[] = null</pre>	ArrayIndexOutOfBoundsExc	
	respOffset = 0	eption.	
	increase()		
10	respOffset < 0		
	incr.length = 4	Shall throw	
	incrOffset = 0	java.lang.	
	<pre>incrLength = 1 resp.length = 4</pre>	ArrayIndexOutOfBoundsExc	
	respOffset = -1	eption.	
	increase()		
11	respOffset + recordLength > resp.length		
	incr.length = 4	Shall throw	
	incrOffset = 0	java.lang.	
	<pre>incrLength = 3 resp.length = 3</pre>	ArrayIndexOutOfBoundsExc	
	respOffset = 2	eption.	
L	increase()		
12	EF is not Cyclic		
	1- select EF _{TARU} fid= 6F03		
	2- incr.length= 3 incrOffset = 0	2 - Shall throw	
	incrLength = 3	uicc.access.UICCException	
	resp.length = 3	with reason code	
	respOffset = 0	COMMAND_INCOMPATIBL	
	increase()	E.	
	3 - select EF _{LARU} , fid=6F0C		
	4 - incr.length= 3	4 - Shall throw	
	<pre>incrOffset = 0 incrLength = 3</pre>	uicc.access.UICCException	
	resp.length = 3	with reason code	
	respOffset = 0	COMMAND_INCOMPATIBL	
	increase()	E.	
13	Access condition not fulfilled		
	1 gologt EE fid CEOC		
	1- select EF _{CNIC} , fid=6F06 2- incr.length= 3	0 01 11 11	
	incrOffset = 0	2 - Shall throw	
	incrLength = 3	uicc.access.UICCException	
	resp.length = 3	with reason code	
	respOffset = 0	SECURITY_STATUS_NOT_	
1.1	increase() EF is invalidated	SATISFIED.	
14	Er is ilivalidated		
	select EF _{CARU} , fid=6F09		
	2 - invalidate()	3 - Shall throw	
	3 - incr.length= 3	uicc.access.UICCException	
	incrOffset = 0	with reason code	
	<pre>incrLength = 3 resp.length = 3</pre>	REF_DATA_INVALIDATED	
	respOffset = 0		
	increase()		
	4 - rehabilitate()		
	5- Restore initial content of EF _{CARU}		
15	Record not found		
	1 Croate an EE Chalic with no record		
	1- Create an EF Cyclic with no record in folder DF_{TEST} , fid=0x2C00		
	2- select EF Cyclic with no record,		
	fid=0x2C00	2. Chall throw	
	3- incr.length= 3	3- Shall throw	
	incrOffset = 0	uicc.access.UICCException	
	incrLength = 3	with reason code	
	resp.length = 3	RECORD_NOT_FOUND	
	<pre>respOffset = 0 increase()</pre>		
	4- Delete Cyclic EF with no records.		
L			

ld	Description	API Expectation	APDU Expectation
16	incrLength out of range		
	1- Create an EF Cyclic with 1 record of 0xFD length in folder DFTEST, fid=0x2CFD 2- Select EF Cyclic, fid=0x2CFD 3- Set record to following value rec[0125] = 0; rec[126252] = 0xFF with an update record. 4- incr.length=128 incrOffset = 1 incrLength = 127 resp.length = 253 respOffset = 0 Incr[] initialized to = {0x00,,0x00,0x01} respOffset = 0 ret = 0xFD increase() 5- incr.length=128	4- resp[0125] = {0x00,,0x00,0x01} and resp[126252] = {0x00,,0x00}	
	<pre>incrOffset = 0 incrLength = 128 resp.length = 128 respOffset = 0 Incr[] initialized to 0 respOffset = 0 increase()</pre> 6- Delete EF Cyclic with fid=0x2CFD.	5- Shall throw an exception	

5.1.1.4 Method readBinary

Test Area Reference: Api_1_Fvw_Redb.

5.1.1.4.1 Conformance requirement

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

5.1.1.4.1.1 Normal execution

- CRRN1:. Reads the data bytes of the current transparent EF, as defined in ETSI TS 102 221 [5].
- CRRN2: The sum of respOffset plus respLength is returned. and the data bytes of the currently selected transparent file are returned in resp.

5.1.1.4.1.2 Parameter errors

- CRRP1: If fileOffset is negative, an instance of UICCException.OUT_OF_FILE_BOUNDARIES shall be thrown.
- CRRP2: If respOffset is negative, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP3: If respLength is negative, an instace of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP4: If the array resp is null, an instance of NullPointerException shall be thrown.
- CRRP5: If respOffset plus respLength is greater than the length of the array resp.length, an instance of ArrayIndexOutOfBoundsException shall be thrown and no read is performed.

• CRRP6: If fileOffset plus respLength exceeds the length of the file, an instance of UICCException shall be thrown. The reason code shall be UICCException.OUT_OF_FILE_BOUNDARIES.

5.1.1.4.1.3 Context errors

- CRRC1: If the method call causes an error to occur that is not expected and thus not handled, an instace of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.
- CRRC2: If the currently selected EF is not transparent, an instance of UICCException shall be thrown. The reason code shall be UICCException.COMMAND_INCOMPATIBLE.
- CRRC3: If the calling applet does not fulfil the access condition, READ, to perform this function, an instance of UICCException shall be thrown. The reason code shall be UICCException.SECURITY_STATUS_NOT_SATISFIED.
- CRRC4: If the currently selected EF is deactivated and the file status of the EF does not allow for the reading of an deactivated file, an instance of UICCException shall be thrown. The reason code shall be UICCException.REF DAT INVALIDATED.
- CRRC5:If the calling applet has currently no EF selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.NO_EF_SELECTED.

5.1.1.4.2 Test area files

Test Source: Test_Api_1_Fvw_Redb.java.

Test Applet: Api_1_Fvw_Redb_1.java.

Cap File: api_1_fvw_redb.cap.

5.1.1.4.3 Test coverage

CRR number	Test case number
N1	1, 2
N2	1, 2
P1	3
P2	6
P3	7
P4	5
P5	8
P6	4
C1	Not testable
C2	9
C3	10
C4	11
C5	12

5.1.1.4.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Read from EF _{TARU}		
	1- select DF _{TEST} , fid=1111		
	select EF _{TARU} , fid=6F03	2 - shall return 20.	
	2- fileOffset = 0	resp shall contain the contents of	
	resp.length = 260	EF _{TARU} starting at index 10.	
	resp[0:259] = 0x55		
	respOffset = 10	<description of="" resp:<="" td=""><td></td></description>	
	respLength = 250	55 55 55 55 55 55 55 55	
	readBinary()	FF FF FF FF FF FF>	

ld	Description	API Expectation	APDU Expectation
2	Read from EF _{TARU}		· ·
_	fileOffset = 5	shall return 15	
	resp.length = 260		
	resp[0:259] = 0x55	resp shall contain the last 5 bytes of	
	respOffset = 10	EF _{TARU} starting at index 10.	
	respLength = 5	<description of="" resp:<="" th=""><th></th></description>	
	readBinary()	55 55 55 55 55 55 55 55 55	
	TeadDinary ()	FF FF FF FF 55 55 55 >	
3	FileOffset is negative		
	fileOffset = -1	Shall throw uicc.access.UICC	
	respOffset = 0	Exception with reason code	
	respLength = 10		
	readBinary()	OUT_OF_FILE_BOUNDARIES.	
4	FileOffset + respLength > EF length		
-	fileOffset = 259	Shall throw uicc.access.UICC	
	respOffset = 0	Exception with reason code	
	respLength = 2		
	readBinary()	OUT_OF_FILE_BOUNDARIES.	
5	resp[] is null		
	fileOffset = 0		
1	resp = null		
1	respOffset = 0		
1	respLength = 10	Chall throw	
	readBinary()	Shall throw	
	-	java.lang.NullPointerException.	
6	respOffset < 0		
	fileOffset = 0	Shall throw	
	respOffset = -1	java.lang.	
	respLength = 10	ArrayIndexOutOfBoundsException.	
	readBinary()	s, man and a same and a same and a same a	
7	respLength < 0		
	fileOffset = 0	Shall throw	
	respOffset = 0	java.lang.	
	respLength = -1	ArrayIndexOutOfBoundsException.	
	readBinary()	· · · · · · · · · · · · · · · · · · ·	
8	RespOffset + respLength > resp.length		
	fileOffset = 0	Shall throw	
	resp.length = 20	java.lang.	
	respOffset = 10	ArrayIndexOutOfBoundsException.	
	respLength = 11		
	readBinary()		
9	EF is not Transparent		
	1- select EF _{LARU} , fid=6F0C		
	2- fileOffset = 0	2 - Shall throw uicc.access.UICC	
	respOffset = 0	Exception with reason code	
	<pre>respLength = 1 readBinary()</pre>	COMMAND_INCOMPATIBLE.	
10	Access condition not fulfilled	+	
10	1- select EF _{TRAC} , fid=6F0E		
	2- fileOffset = 0	0.06-1146	
	respOffset = 0	2- Shall throw uicc.access.UICC	
	respLength = 1	Exception with reason code	
	readBinary()	SECURITY_STATUS_NOT_SATISFIE	
	-	D.	
11	EF is deactivated		
	1 - select EF _{TARU} , fid=6F03		
	2 - deactivateFile()		
	3 - readBinary()	3 - Shall throw	
	4 - activateFile())	uicc.access.UICCException with	
		reason code	
		REF_DATA_INVALIDATED.	
10	No EE coloated		
12	No EF selected		
	1- select DF _{TEST} fid=1111	0 0 11 11	
	2 readBinary()	2 - Shall throw	
		uicc.access.UICCException with	
		reason code NO_EF_SELECTED.	
	•	·	

5.1.1.5 Method readRecord

Test Area Reference: Api_1_Fvw_Redr.

5.1.1.5.1 Conformance requirement

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

5.1.1.5.1.1 Normal execution

- CRRN1: Reads a record or a part of record of a current linear fixed or cyclic EF into byte array resp and the sum of respOffset plus respLength is returned.
- CRRN2: If the access mode is REC_ACC_MODE_CURRENT the current record will be read and the current record pointer shall not be changed.
- CRRN3: If the access mode is REC_ACC_MODE_ABSOLUTE the record addressed by recNumber will be read and the current record pointer shall not be changed.
- CRRN4: If the access mode is REC_ACC_MODE_NEXT the next record relative to the current selected record will be selected and read. The record pointer will be incremented.
- CRRN5: If the access mode is REC_ACC_MODE_NEXT and no current record is selected, the first record will be selected and read. The record pointer will be incremented.
- CRRN6: If the access mode is REC_ACC_MODE NEXT and the current record pointer, of a cyclic EF, is set
 to the last record, the record pointer is set to the first record and the record is read.
- CRRN7: If the access mode is REC_ACC_MODE_PREVIOUS the previous record relative to the current selected record will be selected and read.
- CRRN8: If the access mode is REC_ACC_MODE PREVIOUS and no current record is selected, the last record will be selected and read.
- CRRN9:If the access mode is REC_ACC_MODE_PREVIOUS and the current record pointer of a cyclic EF is set to the first record, the record pointer is set to the last record in this EF and this record shall be read.
- CRRN10: The current record pointer of any other applet shall not be changed.

5.1.1.5.1.2 Parameter errors

- CRRP1: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE_ABSOLUTE and recNumber is less than 0 or greater than records available, an instance of UICCException shall be thrown. The reason code shall be UICCException.RECORD_NOT_FOUND.
- CRRP2: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE_CURRENT, recNumber is 0 and there is no current record selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.RECORD_NOT_FOUND.
- 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 UICCException shall be thrown. The reason code
 shall be UICCException.RECORD_NOT_FOUND.
- 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 UICCException shall be thrown. The
 reason code shall be UICCException.RECORD_NOT_FOUND.
- CRRP5: If the specified offset into the selected record recOffset is less than 0, an instance of UICCException shall be thrown. The reason code shall be UICCException.OUT_OF_RECORD_BOUNDARIES.

- CRRP6: If recOffset plus respLength is greater than the record length, an instance of UICCException shall be thrown. The reason code shall be UICC Exception.OUT_OF_RECORD_BOUNDARIES.
- CRRP7: If the access mode is not between 2 and 4 (2 = REC_ACC_MODE_NEXT, etc.), an instance of UICCException shall be thrown. The reason code shall be UICC Exception.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.

5.1.1.5.1.3 Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.NO_EF_SELECTED.
- CRRC2: If the currently selected EF is neither linear fixed nor cyclic, an instance of UICCException shall be thrown. The reason code shall be UICCException.COMMAND_INCOMPATIBLE.
- CRRC3: If the calling applet does not fulfil the access condition, READ, to perform this function, an instance
 of UICCException shall be thrown. The reason code shall be
 UICCException.SECURITY_STATUS_NOT_SATISFIED.
- 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 UICCException shall be thrown. The reason code shall be UICCException.REF_DATA_INVALIDATED.
- CRRC5: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.1.1.5.2 Test area files

Test Source: Test_Api_1_Fvw_Redr.java.

Test Applet: Api_1_Fvw_Redr_1.java.

Cap File: api_1_fvw_redr.cap.

5.1.1.5.3 Test coverage

CRR number	Test case number
N1	2, 3, 4, 5,6, 8, 9, 10, 11,12,13
N2	3, 9
N3	2, 8
N4	4, 5, 10, 11
N5	4, 11
N6	11
N7	6, 7, 12, 13
N8	6, 13
N9	12
N10	
P1	14
P2	15
P3	5
P4	7
P5	16
P6	17
P7	18
P8	19
P9	20

CRR number	Test case number
P10	21
P11	22
C1	1
C2	23
C3	24
C4	25
C5	Not testable

5.1.1.5.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	No EF selected	·	•
	1- select DF _{TEST} , fid=1111		
	2- recNumber = 1	2-Shall throw	
	mode = REC_ACC_MODE_ABSOLUTE	uicc.access.UICCException with reason	
	recOffset = 0	code NO EF SELECTED.	
	byte[] resp = new byte[20]	code NO_EF_SELECTED.	
	respOffset = 0		
	respLength = 10		
	readRecord()		
2	Read Absolute from Linear Fixed EF		
	1 - select EF _{LARU} , fid=6F0c		
	// Record pointer not set.		
	2 - recNumber = 2		
	mode = REC_ACC_MODE_ABSOLUTE	2 - resp shall be:	
	recOffset = 0	resp={0xAA,0xAA,0xAA}	
	respOffset = 0		
	respLength = 4 readRecord()		
	3- recNumber = 0	2 roop shall be:	
	mode = REC ACC MODE NEXT	3- resp shall be:	
	recOffset = 0	Resp={0x55,0x55,0x55,0x55}	
	respOffset = 0		
	respLength = 4		
	readRecord()		
3	Read Current from Linear Fixed EF		
	//record pointer shall not be changed		
	1- recNumber = 0		
	mode = REC ACC MODE CURRENT	resp shall be:	
	recOffset = 0	•	
	respOffset = 0	resp={0x55,0x55,0x55,0x55}	
	respLength = 4		
	readRecord()		
4	Read Next from Linear Fixed EF		
	1- select EF _{LARU} , fid=6F0c	1- resp shall be:	
	//no record selected	resp={0x55,0x55,0x55,0x55}	
	recNumber = 0		
	<pre>mode = REC_ACC_MODE_NEXT recOffset = 0</pre>		
	respOffset = 0		
	respLength = 4		
	readRecord()		
	2- recNumber = 0	2- resp shall be:	
	mode = REC ACC MODE NEXT	·	
	recOffset = 0	resp={0xAA,0xAA,0xAA,0xAA}	
	respOffset = 0		
	respLength = 4		
	readRecord()		
5	Read Next from Linear Fixed EF		
	recNumber = 0	Shall throw uicc.access.UICC Exception	
	mode = REC_ACC_MODE_NEXT	with reason code	
	recOffset = 0	RECORD_NOT_FOUND.	
	respOffset = 0		
	respLength = 4		
	readRecord()		

ld	Description	API Expectation	APDU Expectation
6	Read Previous from Linear Fixed EF	p	ļ
_	1- recNumber = 0	1- resp shall be:	
	mode = REC_ACC_MODE_PREVIOUS	resp={0x55,0x55,0x55,0x55}	
	recOffset = 0	(6.1.5,0.1.55,0.1.55)	
	respOffset = 0		
	respLength = 4 readRecord()		
	2- select EF _{LARU} , fid=6F0c	2- resp shall be:	
	//no record selected	resp={0xAA,0xAA,0xAA}	
	recNumber = 0	(612 11 1, 612 11 1, 612 11 1,	
	mode = REC_ACC_MODE_PREVIOUS		
	recOffset = 0		
	respOffset = 0		
	respLength = 4		
7	readRecord() Read Previous from Linear Fixed EF		
-	recNumber = 0	Chall throw wise seems LICCE vention	
	mode = REC ACC MODE PREVIOUS	Shall throw uicc.access.UICCException	
	recOffset = 0	with reason code RECORD	
	respOffset = 0	_NOT_FOUND.	
	respLength = 4		
_	readRecord()		
8	Read Absolute from Cyclic EF		
	1 select EF _{CARU} , fid = 6F09		
	2- recNumber = 2	2 - resp shall be:	
	<pre>mode = REC_ACC_MODE_ABSOLUTE recOffset = 0</pre>	resp={0xAA,0xAA,0xAA}	
	recUliset = 0 respOffset = 0		
	respLength = 3		
	readRecord()		
	3- recNumber = 1		
	readRecord()	3 - resp shall be:	
		resp={0xAA,0xAA,0xAA}	
9	Read Current from Cyclic EF		
	//record pointer shall not be changed		
	//from testcase before		
	1- recNumber = 0	1- resp shall be:	
	<pre>mode = REC_ACC_MODE_CURRENT recOffset = 0</pre>	resp={0xAA,0xAA,0xAA}	
	recolliset = 0 respOffset = 0		
	respLength = 3		
	readRecord()		
10	Read Next from Cyclic EF		
_	recNumber = 0	resp shall be:	
	mode = REC_ACC_MODE_NEXT	resp={0xAA,0xAA,0xAA}	
	recOffset = 0	loop for a door a door a d	
	respOffset = 0		
	respLength = 3		
4.4	readRecord()		
11	Read Next from Cyclic EF	A seem about to	
	1- recNumber = 0	1- resp shall be:	
	<pre>mode = REC_ACC_MODE_NEXT recOffset = 0</pre>	resp={0x55,0x55,0x55}	
	respOffset = 0		
	respLength = 3		
	readRecord()		
	2- select EF_{CARU} , fid = 6F09		
	//no rec selected	2- Shall throw	
	recNumber = 0	uicc.access.UICCException with reason	
	mode = REC_ACC_MODE_NEXT	code RECORD_NOT_FOUND.	
	recOffset = 0		
	respOffset = 0 respLength = 3		
	readRecord()		
12	Read Previous from Cyclic EF		
	1- recNumber = 0	1- resp shall be:	
	mode = REC ACC MODE PREVIOUS	resp={0xAA,0xAA,0xAA}	
	recOffset = 0		
	respOffset = 0		
	respLength = 3		
1 1	readRecord()		

ld	Description	API Expectation	APDU Expectation
13	Read Previous from Cyclic EF	·	•
	1- recNumber = 0		
	<pre>mode = REC_ACC_MODE_PREVIOUS recOffset = 0</pre>	1- resp shall be:	
	respOffset = 0	resp={0x55,0x55,0x55}	
	respLength = 3		
	readRecord() 2- select EF _{CARU} , fid = 6F09		
	// no rec selected	2- resp shall be:	
	recNumber = 0	resp={0xAA,0xAA,0xAA}	
	mode = REC_ACC_MODE_PREVIOUS		
	recOffset = 0 respOffset = 0		
	respLength = 3		
	readRecord()		
	Read Absolute from Linear Fixed EF beyond		
	Records 1- select EF _{LARU} , fid=6F0C		
	2- recNumber = -1	2- Shall throw an	
	mode = REC_ACC_MODE_ABSOLUTE	uicc.access.UICCException with reason	
	recOffset = 0	code	
	respOffset = 0 respLength = 4	UICCException.RECORD_NOT_FOUND.	
	readRecord()	3- Shall throw an	
	3- recNumber = 3	uicc.access.UICCException with reason	
	readRecord()	code	
15	No current record in linear fixed EF, read	UICCException.RECORD_NOT_FOUND.	
13	current		
	1- select EF _{LARU} , fid=6F0C // No current		
	record		
	2- recNumber = 0 // curr rec mode = REC ACC MODE CURRENT	2 - Shall throw uicc.access.UICC	
	recOffset = 0	Exception with reason code	
	respOffset = 0	RECORD_NOT_FOUND.	
	respLength = 4 readRecord()		
16	recOffset < 0		
	1- select EF _{LARU} , fid=6F0C		
	2- recNumber = 1 // rec 1	2 - Shall throw uicc.access.UICCException	
	<pre>mode = REC_ACC_MODE_ABSOLUTE recOffset = -1</pre>	with reason code	
	respOffset = 0	OUT_OF_RECORD_BOUNDARIES.	
	respLength = 4		
17	readRecord() recOffset + respLength > Record Length		
' '	1- select EF _{LARU} , fid=6F0C		
	2- recNumber = 1	2 - Shall throw	
	<pre>mode = REC_ACC_MODE_ABSOLUTE recOffset = 2</pre>	sim.access.SIMViewException with reason	
	recollset = 2 respOffset = 0	code OUT_OF_RECORD_BOUNDARIES.	
	respLength = 4		
1-	readRecord()		
18	Reading with invalid mode 1- select EFLARU, fid=6F0C		
	2- recNumber = 0	2 - Shall throw uicc.access.UICCException	
	mode = 1	with reason code INVALID_MODE	
	recOffset = 0	_	
	respOffset = 0 respLength = 4		
	readRecord()	3 - Shall throw uicc.access.	
	3- mode = 5	UICCException with reason code INVALID_MODE.	
19	readRecord() resp is null	IIIVALID_IVIODE.	
	resp[] = null		
	mode = REC_ACC_MODE_CURRENT	Shall throw	
	respOffset = 0 respLength = 10	java.lang.NullPointerException.	
L	readRecord()		
20	respOffset < 0		
	respOffset = -1 respLength = 10	Shall throw	
	resplength = 10 readRecord ()	java.lang.ArrayIndexOutOfBoundsExcepti	
		on.	

ld	Description	API Expectation	APDU Expectation
21	respLength < 0		
	respOffset = 0	Shall throw	
	respLength = -1	java.lang.	
	readRecord ()	ArrayIndexOutOfBoundsException.	
22	respOffset + respLength > resp.length		
	respOffset = 10	Shall throw	
	respLength = 11	java.lang.	
	readRecord ()	ArrayIndexOutOfBoundsException.	
23	EF is neither Cyclic nor Linear Fixed		
	1- select EF _{TNU} , fid=6F02		
	2- respOffset = 0	2 - Shall throw uicc.access.UICCException	
	respLength = 4	with reason code	
	readRecord()	COMMAND INCOMPATIBLE.	
24	Access condition not fulfilled	_	
	1- select EF _{CNR} , fid=6F04		
	2 - respLength = 3	2 - Shall throw uicc.access.UICCException	
	readRecord()	with reason code	
		SECURITY_STATUS_NOT_SATISFIED.	
25	EF is deactivated		
	1 - select EF _{CNU} , fid=6F05		
	deactivateFile()		
	2 - readRecord()	2 - Shall throw uicc.access.UICC	
	3 - activateFile	Exception with reason code	
		REF_DATA_INVALIDATED	

5.1.1.6 Method searchRecord

Test Area Reference: Api_1_Fvw_Sear.

5.1.1.6.1 Conformance requirement

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

5.1.1.6.1.1 Normal execution

- CRRN1: Search a given pattern in byte array patt[] of a current linear fixed or cyclic EF.
- CRRN2: If the pattern is found, the number of each record is stored in byte array response[] and the total number of updated bytes in the array response[] buffer is returned.
- CRRN3: If the value of respLength is greater than the number of records found, the whole response is copied into the response buffer and the number of elements copied is returned by the method.
- CRRN4: If the value of respLength is smaller than the number of found patterns, the first record numbers are copied into the response array and the value of respLength is returned.
- CRRN5: If mode is SIMPLE_SEARCH_START_FORWARD, the search starts at the given record number forward towards the end of the file.
- CRRN6: If mode is SIMPLE_SEARCH _START_BACKWARD, the search starts at a given record number backward towards to the beginning of the file.

- CRRN7: If mode is ENHANCED_SEARCH and SEARCH_INDICATION_START_BACKWARD_FROM_PREVIOUS is set in searchIndication, the search is backward starting from previous record towards to the beginning of the file.
- CRRN8: If the mode is ENHANCED_SEARCH and SEARCH_INDICATION_START_BACKWARD_FROM_PREVIOUS_GR is set in searchIndication, the search is backward starting at a given record from previous record towards to the beginning of the file.
- CRRN9: If the mode is ENHANCED_SEARCH and SEARCH_INDICATION_START_FORWARD_FROM_NEXT is set in searchIndication, the search is forward starting at the next record towards the end of the file.
- CRRN10: If the mode is ENHANCED_SEARCH and SEARCH_INDICATION_FORWARD_FROM_NEXT_GR is set in searchIndication, the search is forward starting at a given record number towards to the end of the file.
- CRRN11: If the mode is ENHANCED_SEARCH, and bit 4 of the most significant byte of the searchIndication is not set, the search starts in the record from the offset (absolute position) given in the less significant byte of searchIndication.
- CRRN12: If the mode is ENHANCED_SEARCH, and bit 4 of the most significant byte of the searchIndication is set, the search starts in the record after the first occurrence of the value contained in the less significant byte of searchIndication.
- CRRN13: If pattern given in patt[] is not found, the method returns 0.
- CRRN14: If one or more matches are found the record pointer shall be set to the first record where the search pattern was found.

5.1.1.6.1.2 Parameter errors

- CRRP1: If mode is not 4, 5 or 6, an instance of UICCException shall be thrown. The reason code shall be UICCException.INVALID MODE.
- CRRP2: If the pattern array patt is null, an instance of java.lang.NullPointerException shall be thrown.
- CRRP3: If the response array response is null, an instance of java.lang.NullPointerExceptino shall be thrown.
- CRRP4: If parameter pattOffset is negative, an instance of java.lang.ArrayIndexOutOfBoundsException shall be thrown.
- CRRP5: If parameter pattLength is negative, an instance of java.lang.ArrayIndexOutOfBoundsException shall be thrown.
- CRRP6: If parameter respOffset is negative, an instance of java.lang.ArrayIndexOutOfBoundsException shall be thrown.
- CRRP7: If parameter respLength negative, an instance of java.lang.ArrayIndexOutOfBoundsException shall be thrown.
- CRRP8: If parameter pattOffset plus pattLength are greater than the length of array patt, an instance of java.lang.ArrayIndexOutOfBoundsException shall be thrown.
- CRRP9: If parameter respOffset plus respLength are greater than the length of array response a ArrayIndexOutOfBoundsException shall be thrown.
- CRRP10: If parameter recordNum is negative, an instance of UICCException shall be thrown. The reason code shall be UICCException.RECORD_NOT_FOUND.
- CRRP11: If parameter recordNum is greather than, the total number of records from the currently selected EF, an instance of UICCException shall be thrown. The reason code shall be UICCException.RECORD_NOT_FOUND.

• CRRP12 If pattLength is greater than record size of the currently selected EF an instance of UICCException shall be thrown. The reason code shall be UICCException.OUT_OF_FILE_BOUNDARIES.

5.1.1.6.1.3 Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.NO_EF_SELECTED.
- CRRC2: If the currently selected EF is not linear fixed or cyclic, an instance of UICCException shall be thrown. The reason code shall be UICCException.COMMAND_INCOMPATIBLE.
- CRRC3: If the calling applet does not fulfil the access condition, READ, to perform this function, an instance of UICCException shall be thrown. The reason code shall be UICCException.SECURITY_STATUS_NOT_SATISFIED.
- CRRC4: If the currently selected EF is deactivated and the file status of the EF does not allow for reading a deactivated file, an instance of UICCException shall be thrown. The reason code shall be UICCException.REF_DATA_INVALIDATED.
- CRRC5: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL ERROR.

5.1.1.6.2 Test area files

Test Source: Test_Api_1_Fvw_Sear.java.

Test Applet: Api_1_Fvw_Sear_1.java.

Cap File: api_1_fvw_sear.cap.

5.1.1.6.3 Test coverage

CRR number	Test case number	
N1	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	
N2	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	
N3	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	
N4	12	
N5	2,28	
N6	3, 29	
N7	6, 7, 34, 35	
N8	8, 9, 36, 37	
N9	10, 11, 30, 31	
N10	12, 13, 32, 33	
N11	6, 8, 10, 12, 30, 32, 34, 36	
N12	7, 9, 11, 13, 31, 33, 35, 37	
N13	2, 3, 5, 7, 9, 11, 28, 31	
N14	6, 7, 10, 11, 30, 31, 34, 35	
P1	13	
P2	14	
P3	15	
P4	16	
P5	17	
P6	18	
P7	19	
P8	20	
P9	21	
P10	22	
P11	23	
P12	24	
C1	1	
C2	25	
C3	26	
C4	27	
C5	Not testable	

5.1.1.6.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	No EF selected		
-			
	1- select DF _{TEST} , fid=1111		
	2- searchRecord()	2-shall throw uicc.access.UICC	
		Exception with reason code	
		NO_EF_SELECTED.	
2	Fixed linear EF,		
	Simple mode search forward		
	1 colors DD fid CD17		
	1- select EF _{LSEA} , fid=6F1A 2- mode = SIMPLE SEARCH START FORWARD		
	recordNum = 1	2- no exception shall be thrown	
	patt[]={0x10,0x03,0x04}	Shall return 0.	
	pattOffset = 0	response shall be:	
	pattLength = 1	response={0,0,0,0}	
	<pre>response[] = {0,0,0,0} respOffset = 0</pre>		
	respLength = 4		
	searchRecord()		
	3- Simple mode search forward		
	mode = SIMPLE_SEARCH_START_FORWARD		
	recordNum = 2	3- Shall return 2.	
	<pre>patt[] = {0x10,0x03,0x04} pattOffset = 1</pre>	response shall be:	
	pattLength = 2	response={0,2,4,0}	
	resp.length = 4	(0,=, .,0)	
	respOffset = 1		
	respLength = 3		
	<pre>searchRecord() 4- Simple mode search forward</pre>		
	mode = SIMPLE SEARCH START FORWARD		
	recordNum = 0		
	patt[] = $\{0x10, 0x03, 0x04\}$		
	pattOffset = 1		
	<pre>pattLength = 2 resp.length = 4</pre>	4- Shall return 2.	
	respOffset = 1	response shall be:	
	respLength = 3	response={0,2,4,0}	
	searchRecord()		
3	Simple mode, search backward		
	1- mode = SIMPLE SEARCH START BACKWARD	4 also II so turno O	
	recordNum = 1	1- shall return 0.	
	$patt[] = \{0x08, 0x0A, 0x0B\}$	response shall be:	
	<pre>pattOffset = 0</pre>	response={0,0,0,0}	
	pattLength = 3		
	response[] = {0,0,0,0} respOffset = 2		
	respLength = 2		
	searchRecord()		
	2-mode = SIMPLE_SEARCH_START_BACKWARD		
	recordNum = 6		
	<pre>patt[]={0x08,0x09,0x0A,0x0B } pattOffset = 1</pre>	2- shall return 3.	
	pattLength = 2	response shall be:	
	response[] = {0,0,0,0}	response={0,4,3,1}	
	respOffset = 1		
	respLength = 3		
	<pre>searchRecord() 3-mode = SIMPLE SEARCH START BACKWARD</pre>		
	recordNum = 0		
	patt[]={0x08,0x09,0x0A,0x0B}		
	pattOffset = 1		
	pattLength = 2	0111	
	response[] = {0,0,0,0} respOffset = 1	3- shall return 3.	
	respLength = 3	response shall be:	
	searchRecord()	response={0,4,3,1}	

ld	Description	API Expectation	APDU Expectation
4	Enhanced Mode, search backward from	711 - Apostation	7 a 2 c 2xpootation
-	previous record, start from an offset in		
	record.	d aball matrime d	
	1- mode = ENHANCED SEARCH	1- shall return 1,	
	searchIndication=	response shall be:	
	SEARCH INDICATION BACKWARD FROM PREVIOUS	resp={3,0,0,0}	
	+ 0x0009		
	recordNum = 0		
	patt[]={0x01,0x02,0x03,0x04}		
	pattOffset = 0		
	pattLength = 3		
	response[] = {0,0,0,0}		
	respOffset = 0		
	respLength = 4		
	searchRecord()		
	2- mode = ENHANCED_SEARCH		
	searchIndication=	0 -1111 4	
	SEARCH_INDICATION_BACKWARD_FROM_PREVIOUS		
	+0x0000	response shall be:	
	recordNum = 0	response={0,0,2,0}	
	<pre>patt[] = {0x0C,0x0D,0x0E,0x0F,0x01,0x02} pattOffset = 0</pre>		
	pattLength = 5		
	response[] = {0,0,0,0}		
	respOffset = 2		
	respLength = 2		
	searchRecord()		
5	Enhanced Mode, search backward from		
	previous record, start from a value in record.		
	,		
	1- mode = ENHANCED SEARCH	1- shall return 0,	
	searchIndication=	response shall be:	
	SEARCH_INDICATION_BACKWARD_FROM_PREVIOUS	resp={0,0,0,0}	
	+ 0x0810	163b-(0,0,0,0)	
	recordNum = 0		
	patt[]={0x01,0x02,0x03,0x04}		
	pattOffset = 0		
	pattLength = 3		
	response[] = {0,0,0,0} respOffset = 0		
	respLength = 4		
	searchRecord()		
	2- perform 3 readRecord() in next mode		
	to set current pointer to pointer 5		
	3- mode = ENHANCED_SEARCH		
	searchIndication=		
	SEARCH_INDICATION_BACKWARD_FROM_PREVIOUS	3- shall return 2	
	+0x080E	response shall be:	
	recordNum = 0	response={4,2,0,0}	
	patt[]={0x01,0x02,0x03,0x04}		
	pattOffset = 3		
	<pre>pattLength = 1 response[] = {0,0,0,0}</pre>		
	response[] = {0,0,0,0} respOffset = 0		
	respLength = 4		
	searchRecord()		
	DOWN 0111100014 (/	L	

ld	Description	API Expectation	APDU Expectation
6	Enhanced Mode, search backward from		
	previous given record, start from an offset in		
	record.		
	1- mode = ENHANCED SEARCH	1- shall return 1,	
	searchIndication=	response shall be:	
	SEARCH INDICATION BACKWARD FROM PREVIOUS	· ·	
	_GR + 0x0000	resp={1,0,0,0}	
	recordNum = 1		
	patt[]= $\{0x01,0x02,0x03\}$		
	pattOffset = 0		
	pattLength = 1		
	response[] = $\{0,0,0,0\}$		
	respOffset = 0		
	respLength = 4		
	searchRecord()	2- shall return 4	
	2- mode = ENHANCED_SEARCH	response shall be:	
	searchIndication=	· ·	
	SEARCH_INDICATION_BACKWARD_FROM_PREVIOUS	response={5,4,3,2}	
	_GR + 0x0004 recordNum = 6		
	patt[]={0x01,0x02,0x03}		
	pattOffset = 0		
	pattLength = 3		
	response[] = {0,0,0,0}		
	respOffset = 0		
	respLength = 4		
	searchRecord()		
7	Enhanced Mode, search backward from		
	previous given record, start from a value in		
	record.		
	1- mode = ENHANCED SEARCH	1- shall return 1,	
	searchIndication=	response shall be:	
	SEARCH INDICATION BACKWARD FROM PREVIOUS	·	
	_GR + 0x080D	resp={1,0,0,0}	
	recordNum = 1		
	$patt[] = \{0x0E, 0x0E, 0x0E\}$		
	pattOffset = 1		
	pattLength = 1		
	response[] = {0,0,0,0}		
	respOffset = 0 respLength = 4		
	resplength = 4 searchRecord()		
	2- mode = ENHANCED SEARCH		
	searchIndication=		
	SEARCH INDICATION BACKWARD FROM PREVIOUS	2- shall return 0	
	GR + 0x0800	response shall be:	
	recordNum = 6	response={0,0,0,0}	
	$patt[] = {0x01,0x02,0x03}$. 555 5/100 - [0,0,0,0]	
	pattOffset = 0		
	pattLength = 3		
	response[] = $\{0,0,0,0\}$		
	respOffset = 0		
	respLength = 4		
	searchRecord()		

ld	Description	API Expectation	APDU Expectation
8	Enhanced Mode, search forward from next		
	record, start from an offset in record.		
	,		
	1- mode = ENHANCED_SEARCH	1- shall return 2	
	searchIndication=	response shall be:	
	SEARCH_INDICATION_FORWARD_FROM_NEXT +	resp={0,0,3,4}	
	0x0003	163p=\0,0,3,4}	
	recordNum = 0		
	patt[] = $\{0x00, 0x0A, 0x0B\}$		
	pattOffset = 1		
	pattLength = 2		
	response[] = {0,0,0}		
	respOffset = 2 respLength = 2		
	searchRecord()		
	2- Perform readRecord() in previous mode		
	3- mode = ENHANCED SEARCH	3- shall return 1	
	searchIndication=	response shall be:	
1	SEARCH INDICATION FORWARD FROM NEXT +	response={4,0,0,0}	
	0x0003		
	recordNum = 0		
	$patt[] = \{0x00,0x0A,0x0B\}$		
	pattOffset = 1		
	pattLength = 2		
	response[] = {0,0,0,0}		
	respOffset = 0		
	respLength = 4		
0	searchRecord() Enhanced Mode, search forward from next		
9	record, start from a value in record.		
	roota, start from a value in roota.		
	1- mode = ENHANCED SEARCH	1- shall return 0,	
	searchIndication=		
	SEARCH INDICATION FORWARD FROM NEXT +	response shall be:	
	0x0804	resp={0,0,0,0}	
	recordNum = 0		
	patt[] = $\{0x01, 0x02, 0x03\}$		
	pattOffset = 1		
	pattLength = 2		
	response[] = {0,0,0,0}		
	respOffset = 2		
	respLength = 2 searchRecord()		
	2- mode = ENHANCED SEARCH		
	searchIndication=		
	SEARCH INDICATION FORWARD FROM NEXT +		
	0x0801	2- shall return 2	
	recordNum = 0	response shall be:	
	patt[] = $\{0x01, 0x02, 0x03\}$	response={5,6,0,0}	
	pattOffset = 2	100001100-10,0,0,0,	
	pattLength = 1		
	response[] = {0,0,0,0}		
	respOffset = 0		
	respLength = 4		
L	searchRecord()		

ld	Description	API Expectation	APDU Expectation
10	Enhanced Mode, search forward from next		
	given record, start from an offset in record.		
	,		
	1- mode = ENHANCED_SEARCH	1- shall return 3,	
	<pre>searchIndication= SEARCH_INDICATION_FORWARD_FROM_NEXT_GR +</pre>	response shall be:	
	0x0007	resp={0,3,4,5}	
	recordNum = 1		
	patt[]={0x01,0x02,0x03}		
	pattOffset = 0		
	pattLength = 3		
	response[] = {0,0,0,0}		
	respOffset = 1 respLength = 3		
	searchRecord()		
	2- mode = ENHANCED_SEARCH		
	searchIndication=		
	SEARCH_INDICATION_FORWARD_FROM_NEXT_GR +		
	0x000C recordNum = 3	response shall be:	
	patt[]={0x03,0x02,0x01}	response={6,0,0,0}	
	pattOffset = 0		
	pattLength = 3		
	response[] = {0,0,0,0}		
	respOffset = 0		
	respLength = 4		
4.4	searchRecord()		
11	Enhanced Mode, search forward from next given record, start from a value in record.		
	given record, start from a value in record.		
	1- mode = ENHANCED SEARCH	1- shall return 0,	
	searchIndication=	response shall be:	
	SEARCH_INDICATION_FORWARD_FROM_NEXT_GR +	resp={0,0,0,0}	
	0x080D	1esp={0,0,0,0}	
	recordNum = 5		
	<pre>patt[]={0x01,0x02,0x03} pattOffset = 0</pre>		
	pattLength = 3		
	response[] = {0,0,0,0}		
	respOffset = 0		
	respLength = 4		
	searchRecord()		
	2- mode = ENHANCED_SEARCH searchIndication=		
	SEARCH INDICATION FORWARD FROM NEXT GR +	2- shall return 1	
	0x080C	response shall be:	
	recordNum = 5	response={5,0,0,0}	
	patt[]= $\{0x01,0x02,0x03\}$	(5,5,5,5)	
	pattOffset = 0		
	pattLength = 3		
	<pre>response[] = {0,0,0,0} respOffset = 0</pre>		
	respLength = 4		
L	searchRecord()		
12	Simple mode, total number of found patterns		
	exceed response[]		
	1- mode = SIMPLE_SEARCH_START_FORWARD	1- shall return 4	
	recordNum = 1 patt[]={0x01,0x02,0x03}	response shall be:	
	pattOffset = 0	response={1,2,3,4}	
	pattLength = 3		
	response[] = {0,0,0,0}		
	respOffset = 0		
	respLength = 4		
	searchRecord()		
	2- mode = SIMPLE SEARCH START FORWARD	2- shall return 4	
	recordNum = 1	response shall be:	
	patt[]= $\{0x01,0x02,0x03\}$	response={1,2,3,4,0}	
	pattOffset = 0		
	pattLength = 3		
	response[] = {0,0,0,0,0} respOffset = 0		
	respLength = 4		
	searchRecord()		
-	•		

ld	Description	API Expectation	APDU Expectation
13	Invalid mode	All Expodution	Al Do Exposition
13	mode = 0x14 (simple search forward with SFI) searchIndication= 0 recordNum = 2 patt[]={0x01,0x02,0x03} pattOffset = 1 pattLength = 2 response[] = {0,0,0,0,0} respOffset = 2 respLength = 2 searchRecord()	shall throw an uicc.access.UICC Exception with reason code INVALID_MODE.	
14	Pattern array is null		
	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[] = null pattOffset = 1 pattLength = 2 response[] = {0,0,0,0,0} respOffset = 2 respLength = 2 searchRecord()</pre>	shall throw an java.lang.NullPointerException.	
15	Response array is null		
	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[]={0x01,0x02,0x03} pattOffset = 0 pattLength = 1 response[] = null respOffset = 0 respLength = 5 searchRecord()</pre>	shall throw an instance of java.lang.NullPointerException.	
16	pattOffset<0		
47	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[]={0x01,0x02,0x03} pattOffset = -1 pattLength = 1 response[] = {0,0,0,0,0} respOffset = 0 respLength = 5 searchRecord()</pre>	shall throw an instance of java.lang.ArrayIndexOutOfBoundsExc eption.	
17	pattLength<0		
10	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[]={0x01,0x02,0x03} pattOffset = 0 pattLength = -1 response[] = {0,0,0,0,0} respOffset = 0 respLength = 5 searchRecord()</pre>	shall throw an instance of java.lang.ArrayIndexOutOfBoundsExc eption.	
18	respOffset <0		
	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[] = {0x01,0x02,0x03} pattOffset = 0 pattLength = 1 response[] = {0,0,0,0,0} respOffset = -1 respLength = 5 searchRecord()</pre>	shall throw an instance of java.lang.ArrayIndexOutOfBoundsExc eption.	

ld	Description	API Expectation	APDU Expectation
19	respLength <0		
	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[]={0x01,0x02,0x03} pattOffset = 0 pattLength = 1 response[] = {0,0,0,0,0} respOffset = 0 respLength = -1 searchRecord()</pre>	shall throw an instance of java.lang.ArrayIndexOutOfBoundsExc eption.	
20	PattOffset + pattLength > patt[]		
	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[]={0x01,0x02,0x03} pattOffset = 2 pattLength = 2 response[] = {0,0,0,0,0} respOffset = 1 respLength = 5 searchRecord()</pre>	shall throw an instance of java.lang.ArrayIndexOutOfBoundsExc eption.	
21	RespOffset + respLength > response[]		
	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[]={0x01,0x02,0x03} pattOffset = 0 pattLength = 1 response[] = {0,0,0,0,0} respOffset = 3 respLength = 3 searchRecord()</pre>	shall throw an instance of java.lang.ArrayIndexOutOfBoundsExc eption.	
22	recordNum < 0		
	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = -1 patt[]={0x01,0x02,0x03} pattOffset = 0 pattLength = 1 response[] = {0,0,0,0,0} respOffset = 0 respLength = 5 searchRecord()</pre>	shall throw an uicc.access.UICC Exception with reason code RECORD_NOT_FOUND	
23	RecordNum > total number of file records		
	<pre>1- mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 7 patt[] = {0x01,0x02,0x03} pattOffset = 0 pattLength = 1 response[] = {0,0,0,0,0} respOffset = 0 respLength = 5 searchRecord()</pre>	1- shall throw an uicc.access.UICC Exception with reason code RECORD_NOT_FOUND	

ld	Description	API Expectation	APDU Expectation
24	pattlength > record length		
	1- mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 3 patt[16] = {0x55,0x55,,0x55} pattOffset = 0 pattLength = 16 response[] = {0,0,0,0,0} respOffset = 0 respLength = 5 searchRecord()	1- shall throw an uicc.access.UICCException with reason code OUT_OF_FILE_BOUNDARIES.	
	2- mode = ENHANCED_SEARCH searchIndication= SEARCH_INDICATION_FORWARD_FROM_NEXT_GR + 0x000E recordNum = 3 patt[] = {0x01,0x02,0x03} pattOffset = 0 pattLength = 3 response[] = {0,0,0,0,0} respOffset = 0 respLength = 5 searchRecord()	2- shall throw an uicc.access.UICCException with reason code OUT_OF_FILE_BOUNDARIES.	
25	Wrong file structure		
	1- select EF _{TDAC} , fid=6F0F 2- searchRecord()	2- shall throw an uicc.access.UICCException with reason code COMMAND_INCOMPATIBLE	
26	Security status not satisfied		
	1- select EF _{LNR} , fid=6F0A 2- searchRecord()	2- shall throw an uicc.access.UICCException with reason code SECURITY_STATUS_NOT_SATISFIED	
27	File deactivated		
	<pre>1- select EF_{LARU}, fid=6F10 2- deactivateFile EF_{LARU} 3- searchRecord() 4- activateFile()</pre>	3- shall throw an uicc.access.UICCException with reason code DATA_INVALIDATED	

ld	Description	API Expectation	APDU Expectation
28	Cyclic EF, Simple mode search forward	·	•
	1- select EF _{CSEA} , fid=6F1B 2- mode = SIMPLE_SEARCH_START_FORWARD recordNum = 1 patt[]={0x10,0x03,0x04} pattOffset = 0 pattLength = 1 response[] = {0,0,0,0,0} respOffset = 0	2- shall return 0 response shall be: response={0,0,0,0,0}	
	<pre>respLength = 5 searchRecord() 3- mode = SIMPLE_SEARCH_START_FORWARD recordNum = 2 patt[] = {0x10,0x03,0x04} pattOffset = 1 pattLength = 2 response[] = {0,0,0,0,0} respOffset = 2 respLength = 3 searchRecord() 4- updateRecord() in previous mode with value {0x03,0x02,0x01,0x03,0x02,0x01,0x03,0x02,0x01} ,0x01,0x03,0x02,0x01,0x03,0x02,0x01}</pre>	3- Shall either return 3 and response shall be: response={0,0,2,4,1} or shall return 2 and response shall be: response={0,0,2,4,0}	
	<pre>(new record 1 is set to previous record 6) 5- mode = SIMPLE_SEARCH_START_FORWARD recordNum = 2 patt[] = {0x10,0x03,0x04} pattOffset = 1 pattLength = 2 response[] = {0,0,0,0,0} respOffset = 2 respLength = 3 searchRecord()</pre>	5- Shall return 3. response shall be: response={0,0,2,3,5}	
29	Cyclic EF, Simple mode search backward		
	<pre>mode = SIMPLE_SEARCH_START_BACKWARD recordNum = 3 patt[]={0x10,0x03,0x04} pattOffset = 1 pattLength = 2 response[] = {0,0,0,0,0} respOffset = 1 respLength = 4 searchRecord()</pre>	Shall either return 3 and response shall be: response={0,3,2,5,0} or shall return 2 and response shall be: response={0,3,2,0,0}	
30	Cyclic EF, Enhanced mode, search forward from next record, start from an offset in record		
	<pre>mode = ENHANCED_MODE searchIndication= SEARCH_INDICATION_START_FORWARD_FROM_NEX T + 0x0009 recordNum = 0 patt[]={0x01,0x02,0x03} pattOffset = 0 pattLength = 3 response[] = {0,0,0,0,0} respOffset = 2 respLength = 3 searchRecord()</pre>	shall return 3 response shall be: response={0,0,4,5,6}	

ld	Description	API Expectation	APDU Expectation
31	Cyclic EF, Enhanced mode, search forward	, and a second	
	from next record, start from a value in		
	record		
	mode = ENHANCED_MODE	shall return 0	
	searchIndication=	response shall be:	
	SEARCH_INDICATION_START_FORWARD_FROM_NEX T + 0x0810	response={0,0,0,0,0}	
	recordNum = 0		
	patt[]={0x01,0x02,0x03}		
	pattOffset = 0		
	<pre>pattLength = 3 response[] = {0,0,0,0,0}</pre>		
	response[] = {0,0,0,0,0}		
	respLength = 3		
	searchRecord()		
32	Cyclic EF, Enhanced mode, search forward		
	from next given record, start from an offset		
	in record		
	mode = ENHANCED_MODE		
	searchIndication=	shall either	
	SEARCH_INDICATION_START_FORWARD_FROM_NEX	return 5 and response shall be:	
	T_GR + 0x0005	response={3,4,5,6,1} or shall	
	recordNum = 3	return 4 and response shall be:	
	<pre>patt[]={0x01,0x02,0x03} pattOffset = 0</pre>	response={3,4,5,6,0}	
	pattLength = 1	1.00pon00=[0, 1,0,0,0]	
	response[] = {0,0,0,0,0}		
	respOffset = 0		
	respLength = 5 searchRecord()		
33			
33	from next given record, start from a value in		
	record		
	1- mode = ENHANCED_MODE	1- shall either	
	searchIndication=	return 2 and response shall be:	
	SEARCH_INDICATION_START_FORWARD_FROM_NEX T GR + 0x0805	response={2,4,0,0,0}	
	recordNum = 6	or shall	
	patt[]={0x0E,0x0F,0x00}	return 0 and response shall be:	
	pattOffset = 0	response={0,0,0,0,0}	
	<pre>pattLength = 2 response[] = {0,0,0,0,0}</pre>		
	respOffset = 0		
	respLength = 5		
	searchRecord()		
	2- Restore EF initial state (record 1		
	shall be assigned to the record that		
	content is		
	{0x01,0x02,0x03,0x04,0x05,0x06,0x07,0x08		
	<pre>,0x09,0x0A, 0x0B,0x0C,0x0D,0xE,0x0F}) using 5 updateRecord() in previous mode</pre>		
34	Cyclic EF, Enhanced mode, search		
	backward from previous record, start from		
	an offset in record		
	1- Set current record pointer to record		
	6 using 5 readRecord() in next mode		
	2- mode = ENHANCED_MODE searchIndication=	2- shall either	
	searchindication= SEARCH_INDICATION_START_BACKWARD_FROM_PR		
	EVIOUS + 0x0003	response={0,0,0,6,0}	
	recordNum = 0	or shall	
	patt[]={0x02,0x01,0x00}	return 0 and response shall be:	
	<pre>pattOffset = 0 pattLength = 2</pre>	response={0,0,0,0,0}	
	response[] = {0,0,0,0,0}		
	respOffset = 3		
	respLength = 2		
	searchRecord()		

ld	Description	API Expectation	APDU Expectation
35	Cyclic EF, Enhanced mode, search	·	-
	backward from previous record, start from a		
	value in record		
	mode = ENHANCED_MODE	shall return 5	
	searchIndication=	response shall be:	
	SEARCH_INDICATION_START_BACKWARD_FROM_PR	response={5,4,3,2,1}	
	EVIOUS + 0x0801	(=, 1,=,=, 1)	
	recordNum = 0 patt[]={0x01,0x02,0x03}		
	pattOffset = 1		
	pattLength = 2		
	response[] = {0,0,0,0,0}		
	respOffset = 0		
	respLength = 5		
	searchRecord()		
36	Cyclic EF, Enhanced mode, search		
	backward from given record, start from an		
	offset in record		
		shall either	
	mode = ENHANCED_MODE	return 1 and response shall be:	
	searchIndication=	response={0,0,0,6,0}	
	SEARCH_INDICATION_START_BACKWARD_FROM_PR	or shall	
	EVIOUS_GR + 0x0003 recordNum = 5	return 0 and response shall be:	
	patt[]={0x02,0x01,0x00}	response={0,0,0,0,0}	
	pattOffset = 0	(0,0,0,0,0)	
	pattLength = 2		
	response[] = {0,0,0,0,0}		
	respOffset = 3		
	respLength = 2		
	searchRecord()		
37	Cyclic EF, Enhanced mode, search		
	backward from given record, start from a		
	value in record		
	,	Shall either	
	mode = ENHANCED_MODE	return 5 and response shall be:	
	searchIndication= SEARCH INDICATION START BACKWARD FROM PR	response={3,2,1,5,4}	
	EVIOUS GR + 0x0801	or shall	
	recordNum = 3	return 3 and response shall be:	
	patt[]={0x01,0x02,0x03}	response={3,2,1,0,0}	
	pattOffset = 1		
	pattLength = 2		
	response[] = {0,0,0,0,0}		
	respOffset = 0		
	respLength = 5		
	searchRecord()		

5.1.1.7 Method select (byte sfi)

Test Area Reference: Api_1_Fvw_Slctb.

5.1.1.7.1 Conformance requirement

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

```
\begin{array}{c} \text{public void select(byte sfi)} \\ \text{ throws UICCException} \end{array}
```

5.1.1.7.1.1 Normal execution

- CRRN1: Selects a file by its Short File Identifier in the current directory of the FileView.
- CRRN2: Allows to update the current file without handling the Select Response.
- CRRN3: The current EF it self can be selected.
- CRRN4: The file context associated with the FileView object is changed after successful execution.

5.1.1.7.1.2 Parameter errors

• CRRP1: If the file which sfi matches is not in the current directory or no file matches the sfi, an instance of UICCException shall be thrown. The reason code shall be UICCException.FILE_NOT_FOUND.

5.1.1.7.1.3 Context errors

- CRRC1: If the method call causes a memory problem (e.g. memory access error), an instance of UICCException shall be thrown. The reason code shall be UICCException.MEMORY_PROBLEM.
- CRRC2: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.1.1.7.2 Test area files

Test Source: Test_Api_1_Fvw_ Slctb.java.

Test Applet: Api_1_Fvw_ Slctb _1.java.

Cap File: api_1_fvw_ slctb.cap.

5.1.1.7.3 Test coverage

CRR number	Test case number
N1	1, 2, 4
N2	Not testable
N3	3
N4	5
P1	4
C1	Not testable
C2	Not testable

5.1.1.7.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Selection possibilities, UICC file system 1- get a FileView UICCSystem.getTheUICCView(CLEAR_ON_RESE T) 2- select DF _{TEST} , fid=1111 3- select with sfi EF _{TNR} , sfi=0x01 4- select with sfi EF _{TNU} , sfi=0x02 5- select with sfi EF _{CNU} , sfi=0x05	2- no exception shall be thrown 3- no exception shall be thrown 4- no exception shall be thrown 5- no exception shall be thrown	
2	Selection possibilities, ADF1 1- get a FileView UICCSystem.getTheFileView(AID_ADF1,CLEA R_ON_RESET) 2- select DF_TEST, fid=1111 3- select with sfi EF_TNR, sfi=0x01 4- select with sfi EF_TNU, sfi=0x02 5- select with sfi EF_CNU, sfi=0x05	2- no exception shall be thrown 3- no exception shall be thrown 4- no exception shall be thrown 5- no exception shall be thrown	
3	Current EF itself can be selected 1- get a FileView UICCSystem.getTheUICCView(CLEAR_ON_RESE T) 2- select DF _{TEST} , fid=1111 3- select with sfi EF _{TNR} , sfi=0x01 4- select with sfi EF _{TNR} , sfi=0x01	4- no exception shall be thrown	
4	FILE_NOT_FOUND 1- try to select a file with sfi=0x55	1- shall throw an uicc.access.UICCException with reason code FILE_NOT_FOUND	

ld	Description	API Expectation	APDU Expectation
5	File context changed		
	10 ~~1~~+ DD ~£; 000	1- file content should be {0xFF,0xFF,0xFF} 2- file content should be {0x55,0x55,0x55}	

5.1.1.8 Method select (short fid)

Test Area Reference: Api_1_Fvw_Slcts.

5.1.1.8.1 Conformance requirement

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

5.1.1.8.1.1 Normal execution

- CRRN1: Selects a file of the UICC file system or of an ADF file system by file identifier.
- CRRN2: Allows to update the current file without handling the Select Response.
- CRRN3: After selecting an ADF/MF/DF no EF is selected.
- CRRN4: After selecting a linear fixed EF no record is selected.
- CRRN5: Any file can be selected by FID which is an immediate child of the current directory.
- CRRN6: Any DF can be selected by FID which is an immediate child of the parent of the current DF.
- CRRN7: The parent of the current directory can be selected by the FID.
- CRRN8: The ADF of the current active application can be selected by the FID.
- CRRN9: The ADF/MF/EF can always be self selected.
- CRRN10: The file context associated with the FileView object is changed after successful execution.

5.1.1.8.1.2 Parameter errors

No requirements.

5.1.1.8.1.3 Context errors

- CRRC1: If the file with a File Identifier which matches fid could not be found according to the selection rule listed in CCRN3, an instance of UICCException shall be thrown. The reason code shall be UICCException.FILE NOT FOUND.
- CRRC2: If the file with a File Identifier which matches fid could not be found according to the selection rule
 listed in CCRN4, an instance of UICCException shall be thrown. The reason code shall be
 UICCException.FILE_NOT_FOUND.
- CRRC3: If the file with a File Identifier which matches fid could not be found according to the selection rule listed in CCRN5, an instance of UICCException shall be thrown. The reason code shall be UICCException.FILE NOT FOUND.
- CRRC4: If the file with a File Identifier which matches fid could not be found according to the selection rule listed in CCRN6, an instance of UICCException shall be thrown. The reason code shall be UICCException.FILE_NOT_FOUND.

- CRRC5: If the method call causes a memory problem (e.g. memory access error), an instance of UICCException shall be thrown. The reason code shall be UICCException.MEMORY_PROBLEM.
- CRRC6: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.1.1.8.2 Test area files

Test Source: Test_Api_1_Fvw_Slcts.java.

Test Applet: Api_1_Fvw_Slcts_1.java.

Cap File: api_1_fvw_slcts.cap.

5.1.1.8.3 Test coverage

CRR number	Test case number
N1	1, 2
N2	5
N3	5
N4	6
N5	1, 2
N6	1, 2
N7	1, 2
N8	1, 2
N9	4
N10	Tested in Api_1_Cont, test case 1 and 2
C1	3
C2	3
C3	3
C4	3
C5	Not testable
C6	Not testable

5.1.1.8.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a FileView object, UICC file system		
	1- get a FileView		
	UICCSystem.getTheUICCView(CLEAR ON RESE		
	T)		
1	Selection possibilities		
	1- select EF _{UICC} , fid=2FF0	No exception shall be thrown	
	2- select DF _{TEST} , fid=1111	'	
	3- select EF _{CNU} , fid=6F05		
	4- select EF _{TAAA} , fid=6F16		
	5- select DF _{SUB_TEST} , fid=2211		
	6- select DF _{TEST} , fid=1111		
	7- select EF _{TAAA} , fid=6F16		
	8- select DF _{TEST} , fid=1111		
	9- select MF, fid=3F00		
	10- select DF _{TEST} , fid=1111		
	11- select EF _{TAAA} , fid=6F16		
	12- select MF, fid=3F00		
2	Selection possibilities, ADF1		
	1- get a FileView	No exception shall be thrown	
	UICCSystem.getTheFileView(AID_ADF1,CLEA		
	R_ON_RESET)		
	2- select EF _{UICC} , fid=2FF0		
	3- select DF _{TEST} , fid=1111		
	4- select EF _{CNU} , fid=6F05		
	5- select EF _{TAAA} , fid=6F16		
	6- select DF _{SUB_TEST} , fid=2211		
	7- select DF _{TEST} , fid=1111		
	8- select EF _{TAAA} , fid=6F16		
	9- select DF _{TEST} , fid=1111		

ld	Description	API Expectation	APDU Expectation
3	No selection of unreachable file		
	1- get a FileView		
	UICCSystem.getTheUICCView(CLEAR_ON_RESE T)		
	2- select EF _{CNU} , fid=6F05	UICCException.FILE_NOT_FOUND	
	3- select DF _{TEST} , fid=1111	shall be thrown.	
	4- select EF_{TAA} , fid=2222	3- No exception shall be thrown	
	5- select EF _{CNU} , fid=6F05	4- A	
	6- select DF_{SUB_TEST} , fid=2211 7- select EF_{TAA} , fid=2222	UICCException.FILE_NOT_FOUND	
	8- select DF _{TELECOM} , fid=7F10	shall be thrown.	
	C DOLOGO DI INECOM, LIG /110	5- No exception shall be thrown 6- No exception shall be thrown	
		7- No exception shall be thrown	
		8- A	
		UICCException.FILE_NOT_FOUND	
		shall be thrown.	
4	Self selection	5.15.1 50 till 1111	
'	1- select MF, fid=3F00		
	2- select MF, fid=3F00	2- No exception shall be thrown	
	3- select DF _{TEST} , fid=1111		
	4- select DF _{TEST} , fid=1111 5- select EF _{TAAA} , fid=6F16	4- No exception shall be thrown	
	6- select EF _{TAAA} , fid=6F16	·	
	7- get a FileView	6- No exception shall be thrown	
	UICCSystem.getTheFileView(AID_ADF1,CLEA		
	R_ON_RESET)	8- No exception shall be thrown	
	8- select ADF, fid=7FFF 9- select ADF, fid=7FFF		
<u> </u>	'	9- No exception shall be thrown	
5	EF not selected after MF/DF selection		
	1- select MF, fid=3F00 2- updateRecord()	2- A	
	3- select DF _{TEST} , fid=1111	UICCException.NO_EF_SELECTED shall be thrown	
	4- updateRecord()	4- A	
		UICCException.NO_EF_SELECTED	
		shall be thrown	
6	No record is selected after selecting linear		
	fixed EF		
	1- select MF,	1 - No exception shall be thrown.	
	fid = 3F00	2 - No exception shall be thrown.	
	2- select DF _{TEST} , 3- select EF _{LARU} ,	3 - No exception shall be thrown.	
	3- Select Erlaru,	4 - Shall throw uicc.access.UICC	
	4 - recNumber = 0	Exception with reason code	
		RECORD_NOT_FOUND.	
	mode = REC_ACC_MODE_ CURRENT	5 - No exception shall be thrown.	
	readRecord()	6 - Shall throw uicc.access.UICC	
		Exception with reason code	
	5- select EF _{CARU} ,	RECORD_NOT_FOUND.	
	C was a Namely and O		
	6 - recNumber = 0		
	mode = REC_ACC_MODE_ CURRENT		
	readRecord()		

5.1.1.9 Method select(short fid, byte[] fcp, short fcpOffset, short fcpLength)

Test Area Reference: Api_1_Fvw_Slctb_bss.

5.1.1.9.1 Conformance requirement

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

UICCException

5.1.1.9.1.1 Normal execution

- CRRN1: Selects a file of the UICC file system or of an ADF file system as defined in ETSI TS 102 221 [5].
- CRRN2: The method returns the FCP information in a form of a TLV structure as specified in ETSI TS 102 221 [5].
- CRRN3: If the fcpLength is greater than the length of the response, the whole response is copied into the fcp buffer and the length of the response is returned by the method.
- CRRN4: If the fcpLength is smaller than the length of the response, the first part of the response is copied into the fcp buffer and the fcpLength is returned by the method.
- CRRN5: After selecting an ADF/MF/DF no EF is selected.
- CRRN6: After selecting a linear fixed EF no record is selected.
- CRRN7: After selecting a cyclic EF the last updated record is the first record.
- CRRN8: Any file can be selected by FID which is an immediate child of the current directory.
- CRRN9: Any DF can be selected by FID which is an immediate child of the parent of the current DF.
- CRRN10: The parent of the current directory can be selected by the FID.
- CRRN11: The ADF of the current active application can be selected by the FID.
- CRRN12: The ADF/MF can always be selected.
- CRRN13: The file context associated with the FileView object is changed after successful execution.
- CRRN14: The current file context of any other applets shall not be changed. This will be tested during the testing of the framework.

5.1.1.9.1.2 Parameter errors

- CRRP1: If the array fcp is null, an instance of NullPointerException shall be thrown.
- CRRP2: If fcpOffset is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP3: If fcpLength is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP4: If fcpOffset plus fcpLength is greater than the length of the array fcp.length an instance of ArrayIndexOutOfBoundsException shall be thrown.

5.1.1.9.1.3 Context errors

- CRRC1: If the file with a File-ID which matches fid could not be found according to the selection rules, an instance of UICCException shall be thrown. The reason code shall be UICCException.FILE_NOT_FOUND.
- CRRC2: If the method call causes a memory problem (e.g. memory access error), an instance of UICCException shall be thrown. The reason code shall be UICCException.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 UICCException.INTERNAL_ERROR.

5.1.1.9.2 Test area files

Test Source: Test_Api_1_Fvw_ Slctb_bss.java.

Test Applet: Api_1_Fvw_ Slctb_bss _1.java.

Cap File: api_1_fvw_ slctb_bss.cap.

5.1.1.9.3 Test coverage

CRR number	Test case number
N1	1, 2, 3, 4, 5, 6, 7, 8, 14, 18, 20, 21
N2	1, 2, 3, 4, 5, 6, 7, 8, 14, 18, 20, 21
N3	1
N4	2, 3, 4 ,5, 6, 7, 8
N5	15, 19
N6	17
N7	18
N8	14
N9	14
N10	14
N11	19, 20
N12	20
N13	20
N14	1, 2, 3, 4, 5, 6, 7, 8, 14, 18, 20
P1	9
P2	10
P3	11
P4	12, 13
C1	16
C2	Not testable
C3	Not testable

5.1.1.9.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a FileView object, UICC file system		
	get a FileView		
-	FileView.getTheUICCView(CLEAR_ON_RESET)		
1	Select EF _{TARU} in MF (Transparent EF)		
	0.1	Shall return at least 19.	
	Select DF _{TEST}	fcp[] shall contain following TLVs:	
	select EF _{TARU} , fid=6F03	1. 82 02 41 21 //file descriptor	
	byte[] fcp = new byte[132]	2. 83 02 2F E2 //file id	
	fcpOffset = 0	3. 8A 01 05 //life cycle status	
	fcpLength = 127	4. 80 02 00 0A // file size	
2	Select EF _{TARU} in MF (Transparent EF)		
	,		
	select EF _{TARU} ,	Shall return 7.	
	fid=6F03	fcp[] shall contain the first 7 bytes of	
	fcpOffset = 0	the FCP structure and contain	
	fcpLength = 7	following TLV.	
	select()		
_	Coloot DE in ME	1. 82 02 41 21 //file descriptor	
3	Select DF _{TEST} in MF		
	fid = DF _{TEST} , fid=1111	Chall return at least 47	
	fcpOffset = 0	Shall return at least 17.	
	fcpLength = 127	fcp[] shall contain following TLVs	
	select()	1. 82 02 78 21 //file descriptor	
		2. 83 02 11 11 //file id	
		3. 8A 01 05 //life cycle status	

ld	Description	API Expectation	APDU Expectation
4	Select EF _{CARU} in DF _{TEST} (Cyclic EF)		
	<pre>select EF_{CARU}, fid=6f09 fcpOffset = 0 fcpLength = 11 select()</pre>	Shall return: 11 fcp[] shall contain following TLV: 82 05 46 21 00 03 02	
5	Select ADF1 select ADF fid=7FFF fcp[0:5]=0x00 fcpOffset=5 fcpLength=127 select	Shall return: at least 27 The first 5 bytes of fcp[] shall be 0x00 and contains following TLVs: 1. 82 02 78 21 //file descriptor 2. 84 10 A0 00 00 00 09 00 05 FF FF FF FF 89 60 00 00 00 //DF Name 3. 8A 01 05 //life cycle	
6	Select MF		
	<pre>select MF, fid= 3F00 fcpOffset = 0 fcpLength = 11 select()</pre>	Shall return: 11 fcp[] shall contain following TLVs: 1. 82 02 38/78 21 //file descriptor 2. 83 02 3F 00 //file ID	
7	Select DF _{TELECOM} in MF select DF _{TELECOM} ,	Shall return 13.	
	<pre>fid=7F10 fcp[0] = fcp[1] = 0x05 fcpOffset = 2 fcpLength = 13 select()</pre>	The first 2 bytes of fcp[] shall be 0x05 and fcp[] shall contain following TLVs 1. 82 02 38/78 21 //file descriptor 2. 83 02 7F 10 //file id	
8	Select EF _{LARU} in DF _{TELECOM} (Linear FixedEF)		
	<pre>select EFLARU, fid = 6F0C fcpOffset = 0 fcpLength = 14</pre>	Shall return 14. fcp[] shall contain following TLVs: 1. 82 05 42 21 00 04 02 2. 83 02 6F 0C	
9	fcp is null select EF _{LARU} , fid = 6F0C byte[] nullBuffer = null fcpOffset = 0	Shall throw java.lang.NullPointerException	
	fcpLength = 15		
10	<pre>fcpOffset < 0 select EFLARU, fid = 6F0C fcpOffset = -1 fcpLength = 15</pre>	Shall throw java.lang.ArrayIndexOutOfBoundsExce ption	
11	fcpLength < 0		
	<pre>select EF_{LARU}, fid = 6F0C fcpOffset = 0 fcpLength = -1</pre>	Shall throw java.lang.ArrayIndexOutOfBoundsExce ption	
12	fcpOffset + fcpLength > fcp.length select EF _{LARU} , fid = 6F0C fcpOffset = 115 fcpLength = 18	Shall throw java.lang.ArrayIndexOutOfBoundsExce ption	
13	fcpOffset + fcpLength > fcp.length select EF _{LARU} , fid = 6F0C fcpOffset = fcpLength + 1 fcpLength = 0	Shall throw java.lang.ArrayIndexOutOfBoundsExce ption	

ld	Description	API Expectation	APDU Expectation
14	Selection possibilities	·	•
		No exception shall be thrown.	
	<pre>0- select MF, fid=3F00 1- select EF_{UICC}, fid=2FF0</pre>		
	2- select DF _{TEST} , fid=1111		
	3- select EF _{CNU} , fid=6F05		
	4- select EF _{TAAA} , fid=6F16		
	5- select DF_{SUB_TEST} , fid=2211 6- select DF_{TEST} , fid=1111		
	7- select EF _{TAAA} , fid=6F16		
	8- select DF _{TEST} , fid=1111		
	9- select MF, fid=3F00		
	10- select DF _{TEST} , fid=1111		
	11- select EF _{TAAA} , fid=6F16 12- select MF, fid=3F00		
15	EF not selected after MF/DF selection		
	1- select MF,		
	fid = 3F00		
	<pre>select EF_{ICCID}, fid = 2FE2</pre>	2 - Shall throw	
	2 - select MF	uicc.access.UICCException with	
	fid = 3F00	reason code NO_EF_SELECTED.	
	select()		
	readBinary()		
16	No selection of non-reachable file		
	1 - select MF,		
	fid = 3F00	2 - Shall throw	
	2 - select EF _{CARU} , fid= 0x6F09	uicc.access.UICCException with	
		reason code FILE_NOT_FOUND.	
17	No record is selected after selecting linear		
	fixed EF		
	1- select MF, fid = 3F00		
	2- select DF _{TEST} ,		
	fid=1111		
	3- select EF _{LARU} ,		
	fid=6F0C 4 - recNumber = 0		
	mode = REC ACC MODE CURRENT	4 - Shall throw uicc.access.UICC	
		Exception with reason code	
	readRecord()	RECORD_NOT_FOUND.	
18	Record pointer in selected cyclic EF		
	1- select MF,		
	fid = 3F00		
	2- select DF _{TEST} , fid=1111		
	3- select EF _{CARU} ,		
	fid=6F09		
	4- byte[] data1 = { 1,2,3 }		
	<pre>mode = REC_ACC_MODE_PREVIOUS updateRecord(data1)</pre>		
	5- select EF _{CARU}		
	fid = 6F09		
	select()		
	<pre>mode = REC_ACC_MODE_PREVIOUS readRecord()</pre>	5 - The contents of data1 and data2	
		shall be identical.	
	readRecord(data2)		
	compare data1 to data2 6- restore original data of EF _{CARU}		
19			
	1- get a FileView		
	UICCSystem.getTheFileView(AID_ADF1,CLEAR		
	_ON_RESET) 2- select ADF,		
	fid = 7FFF	3 - Shall throw	
	select EF _{UICC} ,	uicc.access.UICCException with	
	fid = 2FF0	reason code NO_EF_SELECTED.	
	3 - select ADF fid = 7FFF		
	select()		
	readBinary()		

ld	Description	API Expectation	APDU Expectation
	Reselection 1- Using the ADF FileView select ADF, fid=7FFF select ADF, fid=7FFF 2- Using the UICC FileView select MF, fid=3F00 select MF, fid=3F00 3- select DF _{TEST} , fid=1111 select DF _{TEST} , fid=1111 5- select EF _{TARA} , fid=6F16 select EF _{TARA} , fid=6F16	No exceptions shall be thrown	
	Security attributes 1- Using the ADF FileView select ADF, fid=7FFF select DF _{TEST} , fid=1111 select EF _{LARR1} , fid=6FA1 2- Using the UICC FileView select MF, fid=3F00 select DF _{TEST} , fid=1111 select EF _{TARR3} , fid=6FB3	1- fcp[] shall contain the following TLV 8B 03 AC 00 01 or 8B 06 AC 00 00 01 01 01 2- fcp[] shall contain the following TLV 8B 03 AC 00 03 or 8B 06 AC 00 00 03 01 03	

5.1.1.10 Method status

Test Area Reference: Api_1_Fvw_Stat.

5.1.1.10.1 Conformance requirement

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

5.1.1.10.1.1 Normal execution

- CRRN1: The method returns the File Control Parameter of the current selected DF/MF or ADF as defined in ETSI TS 102 221 [5].
- CRRN2: If the fcpLength is greater than the length of the response, the whole response is copied into the fcp buffer and the length of the response is returned by the method.
- CRRN3: f the fcplength is smaller than the length of the response, the first part of the response is copied into the fcp buffer and the fcpLength is returned by the method.

5.1.1.10.1.2 Parameter errors

- CRRP1: If the array fcp is null, an instance of NullPointerException shall be thrown.
- CRRP2: If fcpOffset is negative, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP3: If fcpLength is negative, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP4: If fcpOffset+fcpLength is greater than fcp.length an ArrayIndexOutOfBoundsException shall be thrown.

5.1.1.10.1.3 Context errors

- CRRC1: If the method call causes a memory problem (e.g. memory access error), an instance of UICCException shall be thrown. The reason code shall be UICCException.MEMORY_PROBLEM.
- CRRC2: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.1.1.10.2 Test area files

Test Source: Test_Api_1_Fvw_Stat.java.

Test Applet: Api_1_Fvw_Stat_1.java.

Cap File: Api_1_Fvw_Stat.cap.

5.1.1.10.3 Test coverage

CRR number	Test case number
N1	1, 2, 3, 4, 5, 11
N2	2, 3
N3	1, 4
P1	6
P2	7
P3	8
P4	9, 10
C1	Not testable
C2	Not testable

5.1.1.10.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Status of MF 1- Get a FileView object, UICC file get a FileView FileView.getTheUICCView(CLEAR_ON_RESET) 2- select MF byte[] fcp = new byte[127] fcp[0:2] = 0xCC fcpOffset = 3 fcpLength = 11 status()	2- Shall return 11. The first 3 bytes of fcp[] shall contain 0xCC. fcp[] shall contain following TLVs: 1. 82 02 38/78 21 //file descriptor 2. 83 02 3F 00 //file ID	
2	Status after select EF _{TARU} in MF 1 - select DF _{TEST} select EF _{TARU} , fid = 6F03 fcpOffset = 0 fcpLength = 127 select() status()	1- Shall return at least 19. fcp[] shall contain following TLVs: 1. 82 02 38/78 21 //file descriptor 2. 83 02 11 11 //file ID	
3	Status of DFTELECOM 1 - fid = 7F10 fcpOffset = 0 fcpLength = 127 status()	1 - Shall return at least 17 and the entire structure of the file control parameters. The file identifier shall be contain the fid of DF _{TELECOM} .	
4	Status DFTELECOM Select DFTELECOM, fid=7F10 fcpOffset = 0 fcpLength = 11 status()	Shall return 11. fcp shall contain the first 11 bytes of the FCP structure starting at index 0. fcp[] shall contain following TLVs: 1. 82 02 38/78 21 //file descriptor 2. 83 02 7F 10 //file id	

ld	Description	API Expectation	APDU Expectation
5	Status ADF1 select ADF, fid=7FFF	Shall return at least 27 fcp[] shall contain the entire FCP	
	fcpOffset = 0	structure	
	fcpLength = 127	fcp[] shall contain following TLVs:	
		1. 82 02 78 21 //file descriptor	
		2. 84 10 A0 00 00 00 09 00 05 FF FF	
		FF FF 89 60 00 00 00 //DF Name	
		3. 8A 01 05 //life cycle	
6	fcp is null		
	<pre>byte[] nullBuffer = null</pre>	Shall throw	
	fcpOffset = 0	java.lang.NullPointerException.	
	fcpLength = 34		
	status()		
7	fcpOffset < 0	CL HA	
	<pre>fcpOffset = -1 fcpLength = 34</pre>	Shall throw	
	status()	java.lang.ArrayIndexOutOfBoundsExce	
	,	ption.	
8	fcpLength < 0		
	fcpOffset = 0	Shall throw	
	<pre>fcpLength = -1 status()</pre>	java.lang.ArrayIndexOutOfBoundsExce	
	``	ption.	
9	fcpOffset + fcpLength > fcp.length		
	fcpOffset = fcp.length-1	Shall throw	
	<pre>fcpLength = 15 status()</pre>	java.lang.ArrayIndexOutOfBoundsExce	
	status()	ption.	
10	fcpOffset + fcpLength > fcp.length		
	<pre>fcpOffset = fcp.length+1</pre>	Shall throw	
	fcpLength = 0	java.lang.ArrayIndexOutOfBoundsExce	
	status()	ption.	
11	Security attributes		
	1 Haine the ADE Bill-Miss.	A feeD shall sente: 0 CD C TOC	
	1- Using the ADF FileView select ADF, fid=7FFF	1- fcp[] shall contain the following TLV	
	select DF _{TEST} ,	8B 03 AC 00 02 or	
	select DF _{ARR2} ,	8B 06 AC 00 00 02 01 02	
	2- Using the UICC FileView	2- fcp[] shall contain the following TLV	
	select MF, fid=3F00	8B 03 AC 00 04 or	
	select DF _{TEST} ,	8B 06 AC 00 00 04 01 04	
	select DF _{ARR4} ,		

5.1.1.11 Method updateBinary

Test Area Reference: Api_1_Fvw_Updb.

5.1.1.11.1 Conformance requirement

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

5.1.1.11.1 Normal execution

• CRRN1: Updated the data bytes of the current selected transparent EF.

5.1.1.11.1.2 Parameter errors

- CRRP1: If recOffset is less than 0, an instance of UICCException shall be thrown. The reason code shall be UICCException.OUT OF FILE BOUNDARIES.
- CRRP2: If fileOffset plus dataLength exceeds the length of the file, an instance of UICCException shall be thrown. The reason code shall be UICCException.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.

5.1.1.11.3 Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.NO_EF_SELECTED.
- CRRC2: If the currently selected EF is not transparent, an instance of UICCException shall be thrown. The reason code shall be UICCException.COMMAND_INCOMPATIBLE.
- CRRC3: If the calling applet does not fulfil the access condition, UPDATE, to perform this function, an instance of UICCException shall be thrown. The reason code shall be UICCException. SECURITY_STATUS_NOT_SATISFIED.
- CRRC4: If the currently selected EF is deactivated and the file status of the EF does not allow for updating of a deactivated file, an instance of UICCException shall be thrown. The reason code shall be UICCException.

 REF DATA INVALIDATED.
- CRRC5: If the method call causes a memory problem (e.g. memory access error), an instance of UICCException shall be thrown. The reason code shall be UICCException.MEMORY PROBLEM.
- CRRC6: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.1.1.11.2 Test area files

Test Source: Test_Api_1_Fvw_Updb.java.

Test Applet: Api_1_Fvw_Updb _1.java.

Cap File: api_1_fvw_updb.cap.

5.1.1.11.3 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,	Not Testable
C6	Not Testable

5.1.1.11.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get the UICC FileView		0
	FileView.getTheUICCView(CLEAR_ON_RESET)		
1	No EF selected		1
	fileOffset = 0	Shall throw uicc.access.UICC	
	byte[] data = new byte[20]	Exception with reason code	
	<pre>data[0] = '55' dataOffset = 0</pre>	NO_EF_SELECTED.	
	dataLength = 10		
	updateBinary()		
2	Update Transparent EF		
	1- select DF_{TEST} , fid = 1111	1- No exception shall be thrown.	
	2- select EF_{TARU} , fid = 6F03	2- No exception shall be thrown.	
	3- fileOffset = 3	3- No exception shall be thrown.	
	<pre>data[0] = '55' dataOffset = 0</pre>	4- No exception shall be thrown.	
	dataLength = 1	Data in resp[0] shall be '55'.	
	updateBinary()		
	4- fileOffset = 3		
	respOffset = 0		
	<pre>respLength = 1 readBinary()</pre>		
3	fileOffset = 254		
3	1- fileOffset = 254	1- No exception shall be thrown.	
	data[0] = '55'	2- No exception shall be thrown.	
	data[1] = 'AA'	Data in resp shall be	
	data[2] = '66'	resp[0] = '55'	
	dataOffset = 0	resp[1] = 'AA'	
	<pre>dataLength = 3 updateBinary()</pre>	resp[2] = '66'	
	2- fileOffset = 254	35	
	respOffset = 0		
	respLength = 3		
	readBinary()		
4	Offset into File out of bounds		
	fileOffset = -1 dataOffset = 0	Shall throw	
	dataLength = 10	uicc.access.UICCException with	
	updateBinary()	reason code OUT_OF_FILE_BOUNDARIES.	
5	fileOffset + dataLength > EF length	COT_OT_TILE_BOOMB/MMEG.	
	fileOffset = 259	Shall throw uicc.access.UICC	
	dataOffset = 0	Exception with reason code	
	dataLength = 2	OUT_OF_FILE_BOUNDARIES.	
	updateBinary()		
6	data is null byte[] nullBuffer = null	Chall throw	
	fileOffset = 0	Shall throw	
	dataOffset = 0	java.lang.NullPointerException.	
	dataLength = 10		
	updateBinary()		
7	dataOffset < 0	0. 11.11	
	fileOffset = 0 dataOffset = -1	Shall throw	
	dataLength = 10	java.lang.	
	updateBinary()	ArrayIndexOutOfBoundsException.	
8	dataLength < 0		
	fileOffset = 0	Shall throw	
	dataOffset = 0	java.lang.	
	<pre>dataLength = -1 updateBinary()</pre>	ArrayIndexOutOfBoundsException.	
9	dataOffset + dataLength > data.length		
	fileOffset = 0	Shall throw	
	dataOffset = 10	java.lang.	
	dataLength = 11	ArrayIndexOutOfBoundsException.	
<u> </u>	updateBinary()		
10	EF is not Transparent		
	1- select DF_{TEST} , fid = 1111 2- select DF_{LARU} , fid = 6F0C	1- No exception shall be thrown.	
	2- select DF _{LARU} , fid = 6FUC 3 - fileOffset = 0	2- No exception shall be thrown.	
	data[0] = '55'	3- Shall throw uicc.access.UICC	
	dataOffset = 0	Exception with reason code	
	dataLength = 1	COMMAND_INCOMPATIBLE.	
	updateBinary()		

ld	Description	API Expectation	APDU Expectation
11	Access condition not fulfilled 1- select DF _{TEST} , fid = 1111 2- select EF _{TNU} , fid = 6F02 3- fileOffset = 0 data[0] = '55' dataOffset = 0 dataLength = 1 updateBinary()	1- No exception shall be thrown. 2- No exception shall be thrown. 3- Shall throw uicc.access.UICCException with reason code SECURITY_STATUS_NOT_SATISFIE D.	
12	<pre>EF is deactivated 1- select EFTNR, fid = 6F01 deactiveFile() 2- fileOffset = 0 data[0] = '55' dataOffset = 0 dataLength = 1 updateBinary() 3- activateFile()</pre>	1- No exception shall be thrown. 2- Shall throw uicc.access.UICCException with reason code REF_DATA_INVALIDATED 3- No exception shall be thrown.	

5.1.1.12 Method updateRecord

Test Area Reference: Api_1_Fvw_Updr.

5.1.1.12.1 Conformance requirement

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

5.1.1.12.1.1 Normal execution

- CRRN1: Reads a record or a part of record of the current linear fixed or cyclic EF into byte array data[].
- CRRN2: If the access mode is REC_ACC_MODE_ CURRENT the current selected record will be updated. The current record pointer shall not be changed.
- CRRN3:If the access mode is REC_ACC_MODE_ABSOLUTE and the file is linear fixed EF, the record addresss by recNumber will be updated. The current record pointer shall not be changed.
- CRRN4: 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. The record pointer shall be updated.
- CRRN5: If the access mode is REC_ACC_MODE_NEXT and the record pointer has not been previously set within the selected EF, the record pointer shall be set to the first record and this record should be updated.
- CRRN6: If the access mode is REC_ACC_MODE_PREVIOUS the previous record relative to the current selected record will be selected and updated. The record pointer shall be updated.
- CRRN7: If the access mode is REC_ACC_MODE_PREVIOUS and the record pointer has not been previously
 set within the selected EF, then the record pointer should be set to the last record in this EF. This record should
 be updated.
- CRRN8: If the access mode is REC_ACC_MODE_PREVIOUS, the file is a cyclic EF, the oldest record will
 be updated independent of the current record pointer and this record becomes record number 1 and the current
 record.

5.1.1.12.1.2 Parameter errors

- CRRP1: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE_ABSOLUTE and recNumber is less than 0 or greater than records available, an instance of UICCException shall be thrown. The reason code shall be UICCException.RECORD_NOT_FOUND.
- CRRP2: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE _CURRENT, recNumber is 0 and there is no current record selected, an instance of UICCException shall be thrown. The reason code shall be UICCException. RECORD_NOT_FOUND.
- 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 UICCException shall be thrown. The reason code
 shall be UICCException. RECORD_NOT_FOUND.
- 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 UICCException shall be thrown. The
 reason code shall be UICCException. RECORD_NOT_FOUND.
- CRRP5: If the specified offset into the selected record recOffset is less than 0, an instance of UICCException shall be thrown. The reason code shall be UICCException.OUT OF RECORD BOUNDARIES.
- CRRP6: If recOffset plus dataLength is greater than the record length, an instance of UICCException shall be thrown. The reason code shall be UICCException.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 UICCException shall be thrown. The reason code shall be UICCException.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 UICCException shall be thrown. The reason code shall be UICCException.INVALID_MODE or UICCException.COMMAND_INCOMPATIBLE.
- 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.

5.1.1.12.1.3 Context errors

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

5.1.1.12.2 Test area files

Test Source: Test_Api_1_Fvw_Updr.java.

Test Applet: Api_1_Fvw_ Updr_1.java.

Cap File: api_1_fvw_updr.cap.

5.1.1.12.3 Test coverage

CRR number	Test case number	
N1	2, 3, 4, 5, 7, 8, 10	
N2	2	
N3	3	
N4	5	
N5	4	
N6	7, 8, 9, 10	
N7	7	
N8	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	Not testable	
C6	Not testable	

5.1.1.12.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get the UICC FileView		P
U	FileView.getTheUICCView(CLEAR ON RESET)		
4			
1	No EF selected	OL 11.41	
	RecNumber = 1	Shall throw uicc.access.UICC Exception	
	mode = REC_ACC_MODE_ABSOLUTE	with reason code NO_EF_SELECTED.	
	recOffset = 0		
	<pre>byte[] data = new byte[20]</pre>		
	dataOffset = 0		
	dataLength = 10		
	updateRecord()		
2	Update Absolute from Linear Fixed EF		
_	1- select DF_{TEST} , fid = 1111		
	2- select EF _{LARU} , fid = 6F0C	4 1 1 1 1 1	
	// Record pointer not set.	1- No exception shall be thrown.	
	3- recNumber = 2	2- No exception shall be thrown.	
	mode = REC_ACC_MODE_ABSOLUTE	3- No exception shall be thrown.	
	data[0:3] = '11'	o no exception chair se time with	
	recOffset = 0		
	dataOffset = 0		
	dataLength = 4		
1	updateRecord()		
	respOffset = 0		
1	respLength = 0		
	readRecord()		
	4- // verify result		
	read respOffset = 0		
	respLength = 4		
	recNumber = 0	4- Resp shall be: 11 11 11 11	
	mode = REC ACC MODE CURRENT	1 TOOP SHAIL BE. 11 11 11 11	
	readRecord()		
3	Update Current from Linear Fixed EF		
3		4 81	
	1- select DF _{TEST} , fid = 1111	1- No exception shall be thrown.	
	2- select EF _{LARU} , fid = 6F0C	No exception shall be thrown.	
	<pre>// Set record pointer with mode "next".</pre>	·	
	3- recNumber = 0	3- No exception shall be thrown.	
	mode = REC_ACC_MODE_NEXT	5- No exception shall be thrown.	
	recOffset = 0		
	data[0:3] = '00'		
	dataOffset = 0		
	dataLength = 4		
	updateRecord()		
	// write data with mode "current"		
	4- recNumber = 0		
	data[0:3] = '22'		
	mode = REC ACC MODECURRENT		
	updateRecord()		
	5- //verify result		
	respOffset = 0		
	respLength = 4	F. No expension that the di	
	recNumber = 0	5- No exception shall be thrown.	
		resp shall be:	
	mode = REC_ACC_MODE_ CURRENT	resp[0] = '22'	
	readRecord()	resp[1] = '22'	
		resp[2] = '22'	
		resp[3] = '22'	
4	Update Next from Linear Fixed EF, no		
1	record pointer set		
	1- select DF _{TEST} , fid = 1111	1- No exception shall be thrown.	
	2- select EF _{LARU} , fid = 6F0C	2- No exception shall be thrown.	
	3- recNumber = 0	2 140 GAGGPRION SHAIL DE UNOWN.	
	mode = REC ACC MODE NEXT		
	recOffset = 0		
	data[0:3] = '33'		
	dataOffset = respOffset = 0		
	dataLength = respLength = 4	4- No exception shall be thrown.	
	updateRecord()	resp shall be:	
	mode = REC_ACC_MODE_ABSOLUTE_CURRENT	resp[0] = '33'	
	4-// verify result	resp[1] = '33'	
	readRecord()	resp[2] = '33'	
L	<u> </u>	resp[3] = '33'	

ld	Description	API Expectation	APDU Expectation
5	Update Next from Linear Fixed EF, record	-	-
	pointer set	1- No exception shall be thrown.	
	1- recNumber = 0	·	
	mode = REC_ACC_MODE_NEXT		
	recOffset = 0		
	data[0:3] = '44'	2- No exception shall be thrown.	
	<pre>dataOffset = 0 dataLength = 4</pre>	resp shall be:	
	updateRecord()	resp[0] = '44'	
	2- //verify result	resp[1] = '44'	
	readRecord()	resp[2] = '44'	
		resp[3] = '44'	
6	Update Next from Linear Fixed EF, no more		
	records		
	recNumber = 0	Shall throw uicc.access.UICCException	
	mode = REC_ACC_MODE_NEXT	with reason code	
	recOffset = 0	RECORD_NOT_FOUND.	
	<pre>data[0:3] = '55' dataOffset = 0</pre>		
	dataLength = 4		
	updateRecord()		
7	Update Previous from Linear Fixed EF, no		
	record pointer set		
	1- select DF _{TEST} , fid = 1111	1- No exception shall be thrown.	
	2- select EF _{LARU} , fid = 6F0C	No exception shall be thrown.	
	3- recNumber = 0	No exception shall be thrown.	
	<pre>mode = REC_ACC_MODE_PREVIOUS recOffset = 0</pre>		
	data[0:3] = '66'		
	dataOffset = respOffset = 0		
	dataLength = respLength = 4	4- No exception shall be thrown.	
	updateRecord()	resp shall be:	
	4- //verify result	resp[0] = '66'	
	readRecord()	resp[1] = '66'	
		resp[2] = '66'	
		resp[3] = '66'	
8	Update Previous from Linear Fixed EF,		
	record pointer set		
	1- recNumber = 0	1- No exception shall be thrown	
	<pre>mode = REC_ACC_MODE_PREVIOUS recOffset = 0</pre>		
	data[0:3] = '77'	2- No exception shall be thrown.	
	dataOffset = respOffset = 0	esp shall be:	
	dataLength = respLength = 4	resp[0] = '77'	
	updateRecord()	resp[1] = '77'	
	2- //verify result	resp[2] = '77'	
<u> </u>	readRecord()	resp[3] = '77'	
9	Update Previous from Linear Fixed EF, no		
	more records	Ch all throw	
	recNumber = 0 mode = REC ACC MODE PREVIOUS	Shall throw	
	recOffset = 0	sim.access.SIMViewException with	
	data[0:3] = '88'	reason code RECORD_NOT_FOUND.	
	dataOffset = respOffset = 0		
	dataLength = respLength = 4		

ld	Description	API Expectation	APDU Expectation
10	Update Previous from Cyclic EF	,	F
	1- select DF _{TEST} , fid = 1111		
	2- select EF _{CARU} , fid = 6F09	1- No exception shall be thrown.	
	3- recNumber = 2 mode = REC_ACC_MODE_ABSOLUTE	2- No exception shall be thrown.	
	recOffset = 0	3- No exception shall be thrown.	
	respOffset = 0		
	respLength = 3		
	readRecord() 4- recNumber = 2		
	mode = REC ACC MODE PREVIOUS	4- No exception shall be thrown.	
	data[0:2] = 'FF'	14- No exception shall be thrown.	
	dataOffset = 0		
	dataLength = 3		
	<pre>updateRecord() 5- //verify result</pre>		
	readRecord()		
		5- No exception shall be thrown.	
		resp shall be:	
		resp[0] = 'FF'resp[1] = 'FF'	
		resp[2] = 'FF'	
11	Update Absolute from Linear Fixed EF		
	beyond Records 1- select EFLARU, fid = 6F0C	1. No expension shall be through	
	2-recNumber = -1	1- No exception shall be thrown. 2- Shall throw	
	mode = REC_ACC_MODE_ABSOLUTE	uicc.access.UICCException with reason	
	recOffset = 0	code RECORD_NOT_FOUND.	
	dataOffset = 0	3- Shall throw	
	<pre>dataLength = 4 updateRecord()</pre>	uicc.access.UICCException with reason	
	3- recNumber = 3	code RECORD_NOT_FOUND.	
	updateRecord()		
12	No current record in linear fixed EF, update		
	current 1- select EF _{LARU} , fid = 6F0C	4. No expension shall be through	
	// No curr rec	1 - No exception shall be thrown.	
	2- recNumber = 0 // curr rec	2 - Shall throw	
	mode = REC_ACC_MODE _CURRENT	uicc.access.UICCException with reason	
	<pre>recOffset = 0 dataOffset = 0</pre>	code RECORD_NOT_FOUND.	
	dataLength = 4		
	updateRecord()		
13	recOffset < 0		
	1- select EF _{LARU} , fid = 6F0C 2- recNumber = 1 // rec 1	1- No exception shall be thrown.	
	mode = REC_ACC_MODE_ABSOLUTE	2- Shall throw uicc.access.UICC	
	dataOffset = 0	Exception with reason code OUT_OF_RECORD_BOUNDARIES.	
	dataLength = 4	COT_OT_RECORD_DOURDANIES.	
14	updateRecord() recOffset + dataLength > record.length		
14	1- select EF _{LARU} , fid = 6F0C	1- No exception shall be thrown.	
	2- recNumber = 1	1 110 CACOPHON SHAIL DE HITOWII.	
	mode = REC_ACC_MODE_ABSOLUTE	2- Shall throw uicc.access.UICC	
	recOffset = 2 dataOffset = 0	Exception with reason code	
	dataDength = 4	OUT_OF_RECORD_BOUNDARIES.	
	updateRecord()		
15	Updating with invalid mode		
	1- select EF _{LARU} , fid = 6F0C	1 - No exception shall be thrown.	
	2- recNumber = 0 mode = 1	2 - Shall throw uicc.access.UICC	
	recOffset = 0	Exception with reason code	
	dataOffset = 0	INVALID_MODE.	
	dataLength = 4		
	<pre>updateRecord() 3- mode = 5</pre>	3 - Shall throw uicc.access. UICC	
	updateRecord()	Exception with reason code	
		INVALID_MODE.	

ld	Description	API Expectation	APDU Expectation
16	Updating Cyclic EF with invalid mode		-
	1- select DF _{TEST} , fid = 1111 2- select EF _{CARH} , fid = 6F09	1 - No exception shall be thrown.	
	set record pointer to record nr 1	2 - No exception shall be thrown.	
	3- recNumber = 0	3 - Shall throw uicc.access. UICC	
	mode = REC_ACC_MODE_NEXT	Exception with reason code	
	<pre>recOffset = 0 data[0:2] = '00'</pre>	INVALID_MODE or COMMAND_INCOMPATIBLE.	
	dataOffset = 0	COMMAND_INCOMPATIBLE.	
	dataLength = 3	4 - Shall throw uicc.access.UICC	
	updateRecord()	Exception with reason code	
	4- recNumber = 0	INVALID_MODE or	
	<pre>mode = REC_ACC_MODE_CURRENT updateRecord()</pre>	COMMAND_INCOMPATIBLE.	
	5- recNumber = 2	5 - Shall throw uicc.access. UICC	
	mode = REC ACC MODE ABSOLUTE	Exception with reason code	
	updateRecord()	INVALID_MODE or	
	6- recNumber = 0	COMMAND_INCOMPATIBLE.	
	<pre>mode = 5 updateRecord()</pre>	6 - Shall throw uicc.access. UICC	
	apaacenecora()	Exception with reason code	
		INVALID_MODE or	
<u> </u>	de (e F7 transition	COMMAND_INCOMPATIBLE.	
17	data[] is null	CL III II	
	dataOffset = 0	Shall throw	
	dataLength = 10	java.lang.NullPointerException.	
	updateRecord()		
18	dataOffset < 0		
	dataOffset = -1	Shall throw	
	<pre>dataLength = 10 updateRecord()</pre>	java.lang.	
40		ArrayIndexOutOfBoundsException.	
19	dataLength < 0	Shall throw	
	dataLength = -1	java.lang.	
	updateRecord()	ArrayIndexOutOfBoundsException.	
20	dataOffset + dataLength > data.length	7 trayindoxodtorbodridoExcoption.	
	dataOffset = 10	Shall throw	
	dataLength = 11	java.lang.	
	updateRecord()	ArrayIndexOutOfBoundsException.	
21	EF is neither Cyclic nor Linear Fixed		
	1- select DF _{TEST} , fid = 1111	1- No exception shall be thrown.	
	2- select EF _{TNR} , fid = 6F01 3- dataOffset = 0	2- No exception shall be thrown.	
	dataLength = 4	3- Shall throw uii.access.UICC	
	updateRecord()	Exception with reason code	
20	Acces condition not fulfilled	COMMAND_INCOMPATIBLE.	
22	Access condition not fulfilled 1- select EF _{CNU} , fid = 6F05	1- No exception shall be thrown	
	2- recOffset = 0	1- No exception shall be thrown. 2- Shall throw uicc.access.UICC	
	dataOffset = 0	Exception with reason code	
	dataLength = 1	SECURITY_STATUS_NOT_SATISFIE	
	<pre>mode = REC_ACC_MODE_PREVIOUS updateRecord()</pre>	D.	
	updateRecord() 3- fid = EFLNU		
	select()		
	4- recNumber = 1	3- No exception shall be thrown.	
	mode = REC_ACC_MODE_ CURRENT		
	recOffset = 0 dataOffset = 0	4- Shall throw uicc.access.UICC	
	dataLength = 1	Exception with reason code	
	updateRecord()	SECURITY_STATUS_NOT_SATISFIE	
		D	

ld	Description	API Expectation	APDU Expectation
23	FF is deactivated 1- select EF _{CNR} , fid = 6F04 invalidate() 2- updateRecord() 3- activateFile() 4- restore the file content EF _{LARU} , EF _{CARU}	1- No exception shall be thrown. 2- Shall throw uicc.access.UICCException with reason codeREF_DATA_INVALIDATED 3- No exception shall be thrown.	
24	Restore the file content 1- restore the file content of EF _{LARU} : record 1 = 0x55,0x55,0x55,0x55 record 2 = 0xAA,0xAA,0xAA,0xAA 2- restore the file content of EF _{CARI} : record 1 = 0x55,0x55,0x55,0x55 record 2 = 0xAA,0xAA,0xAA,0xAA	3- No exception shall be thrown.	

5.1.2 Interface UICCConstants

This interface hold all the constants defined in ETSI TS 102 221 [5]. No test of constants will be performed.

5.1.3 Interface UICCSystem

5.1.3.1 Method getTheUICCView

Test Area Reference: Api_1_Usy_Getfb.

5.1.3.1.1 Conformance requirement:

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

5.1.3.1.1.1 Normal execution

- CRRN1: returns a reference to class which implements the FileView interface on the UICC file system.
- CRRN2: return null if one of the javacard.framework.Applet.register(..) method has not previously invoked by the applet invoking this method or the file system server returns null.
- CRRN3: It is not possible to get access to files which are located under any ADF with this FileView.
- CRRN4: After a successful invocation of the method, the MF is the current selected file.
- CRRN5: A separate and independent file context shall be associated with each and every FileView object: the operation performed on files in a given FileView object shall not affect the file context associated with any other FileView object. This context can be transient or persistent depending on what was required by the Applet during the creation of the FileView object.

5.1.3.1.1.2 Parameter errors

• CRRP1: If event is not one of the following values JCSystem.NOT_A_TRANSIENT_OBJECT, JCSystem.CLEAR_ON_DESELECT, or JCSystem.CLEAR_ON_RESET a SystemException is thrown. The value of the SystemException shall be SystemException.ILLEGAL_VALUE.

5.1.3.1.1.3 Context errors

- CRRC1: If event is JCSystem.CLEAR_ON_RESET or JCSystem.CLEAR_ON_DESELECT and not enough transient memory space is available a SystemException shall be thrown with reason code SystemException.NO_TRANSIENT_SPACE.
- CRRC2: If event is JCSystem.CLEAR_ON_DESELECT and the applet is not a currently selected applet a SystemException with reason code SystemException.ILLEGAL_TRANSIENT shall be thrown.

5.1.3.1.2 Test area files

Test Source: Test_Api_1_Usy_Getfb.java.

Test Applet: Api_1_Usy_Getfb_1.java.

Cap File: api_1_usy_getfb.cap.

5.1.3.1.3 Test coverage

CRR number	Test case number
N1	2
N2	1
N3	2
N4	2
N5	3
P1	7
C1	5, 6
C2	4

5.1.3.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Method returns null		
	Install Applet1 with full access rights on the UICC file system		
	Invoke the method getTheUICCView before the javacard.framework.Applet.register() method invocation	The method returns null	

ld	Description	API Expectation	APDU Expectation
2	Normal execution	7.1 Apostation	7.1. 2 C = 2.1p C C 1.11 C 1.
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	Invoke the method getTheUICCView() with the event JCSystem.NOT_A_TRANSIENT_OBJECT and stores the result in a class variable	No exception shall be thrown	
	FV1 Applet1 calls FV1.status() command	Current selected DF is the MF	
	Select $\mathrm{DF}_{\mathrm{Test}}$ using FV1 Select $\mathrm{EF}_{\mathrm{TARU}}$ using FV1 Read first 3 bytes using FV1	Expected value is {FF FF FF}	
	Reset Terminal profile		
	2- Envelope menu selection is sent to the UICC	2- Applet1 is triggered	
	Applet1 calls FV1.status() command	Current selected DF is DF _{Test}	
	Read first 3 bytes using FV1 Applet1 calls FV1.select(0x7FFF)	Expected value is {FF FF FF} UICCException.FILE_NOT_FOUN D is thrown	
	Invoke the method getTheUICCView() with the event JCSystem.CLEAR_ON_RESET and stores the result in a class variable FV2	No exception shall be thrown	
	Applet1 calls FV2.status() command Select DF _{Test} using FV2 Select EF _{TARU} using FV2	Current selected DF the MF	
	Read first 3 bytes using FV2 Reset Terminal profile	Expected value is {FF FF FF}	
	4 - Envelope menu selection is sent to the UICC		
	Applet1 calls FV2.status() command	4- Applet1 is triggered	
	Read first 3 bytes using FV2	Current selected DF is the MF	
	Applet1 calls FV2.select(0x7FFF)	UICCException. NO_EF_SELECTED	
	5- Select the Applet by AID	UICCException.FILE_NOT_FOUN D is thrown	
	Invoke the method in the method process() getTheUICCView() with the event JCSystem.CLEAR ON DESELECT and stores the	5- Applet1 is selected	
	result in a class variable FV3	No exception shall be thrown	
	Applet1 calls FV3.status() command		
	Select DF_{Test} using FV3 Select EF_{TARU} using FV3 Read first 3 bytes using FV3	Current selected DF the MF	
	Select ADF2 by AID		
	6- Select the Applet by AID	Expected value is {FF FF FF}	
	Applet1 calls FV3.status() command		
	Read first 3 bytes using FV3	6- Applet1 is selected	

ld	Description	API Expectation	APDU Expectation
	Applet1 calls FV3.select(0x7FFF)	Current selected DF is the MF	
		UICCException. NO_EF_SELECTED UICCException.FILE_NOT_FOUN D is thrown	
3	FileView context independency		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- Check that previous fileviews are different (FV1 != FV2 != FV3)		
	3- Select $\mathrm{DF_{Test}}/\mathrm{EF_{LARU}}$ using FV1	3- No exception shall be thrown	
	4- Select $\mathrm{DF_{Test}}/\mathrm{EF_{CARU}}$ using FV2	4- No exception shall be thrown	
	5- Select DF _{Test} /EF _{CARU} using FV3	5- A security exception shall be	
	6- Read record number 1 using FV1 (in absolute mode)	thrown	
	7- Read record number 2 using FV2 (in absolute mode)	6- Expected value is "55 55 55 55"	
		7- Expected value is "AA AA AA"	
4	ILLEGAL_TRANSIENT SystemException		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 calls getTheUICCView() method with the event JCSystem.CLEAR_ON_DESELECT	2- SystemException. ILLEGAL_TRANSIENT is thrown	
5	NO_TRANSIENT_SPACE SystemException with CLEAR_ON_RESET FileView object		
	1- Get the available transient memory space using method length=JCSystem.getAvailableMemory(MEMORY_TYPE_TRANSIENT_RESET)	1- No exception shall be thrown	
	2- Fill the available transient memory space by creating array, using method JCSystem.makeTransientByteArray(length, JCSystem.CLEAR_ON_RESET)	2- No exception shall be thrown	
	3- Applet calls method getTheUICCView() with event JCSystem.CLEAR_ON_RESET	3- SystemException. NO_TRANSIENT_SPACE is thrown	
	4- Reset		

ld	Description	API Expectation	APDU Expectation
6	NO_TRANSIENT_SPACE SystemException		
	with CLEAR_ON_DESELECT FileView object		
	1- Select the Applet by AID	1- Applet1 is selected	
	2- Get the available transient memory space using method length=JCSystem.getAvailableMemory(MEMORY	2- No exception shall be thrown	
	TYPE_TRANSIENT_DESELECT)		
	3- Fill the available transient memory		
	<pre>space by creating array, using method JCSystem.makeTransientByteArray(length, JCSystem.CLEAR_ON_DESELECT)</pre>	3- No exception shall be thrown	
	4- Applet calls method getTheUICCView() with event		
	JCSystem.CLEAR_ON_DESELECT	4- SystemException.	
		NO_TRANSIENT_SPACE is	
7	ILLECAL VALUE SystemEveention	thrown	
'	ILLEGAL_VALUE SystemException		
	1- Invoke the method getTheUICCView() with	1-	
	event different from 0,1,2	SystemException.ILLEGAL_VALU	
		E is thrown	

5.1.3.2 Method getTheFileView

Test Area Reference: Api_1_Usy_Getfob.

5.1.3.2.1 Conformance requirement:

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

5.1.3.2.1.1 Normal execution

- CRRN1: returns a reference to class which implements the FileView interface on an ADF file system defined by its AID.
- CRRN2: returns null if the ADF with the AID does not exist.
- CRRN3: returns null if one of the javacard.framework.Applet.register(..) method has not previously invoked by the applet invoking this method or the filesystem server does not exist or the filesystem server returns null.
- CRRN4: After a successful invocation of the method the ADF is the currently selected file.
- CRRN5: A separate and independent file context shall be associated with each and every FileView object: the operation performed on files in a given FileView object shall not affect the file context associated with any other FileView object. This context can be transient or persistent depending on what was required by the Applet during the creation of the FileView object.
- CRRN6: It is not possible to access files which are not located under the ADF.

5.1.3.2.1.2 Parameters error

- CRRP1: If event is not one of the following values JCSystem.NOT_A_TRANSIENT_OBJECT, JCSystem.CLEAR_ON_DESELECT, or JCSystem.CLEAR_ON_RESET a SystemException is thrown. The value of the SystemException shall be SystemException.ILLEGAL_VALUE.
- CRRP2: If the AID is null a NullPointerException shall be thrown.

5.1.3.2.1.3 Context errors

- CRRC1: If event is JCSystem.CLEAR_ON_RESET or JCSystem.CLEAR_ON_DESELECT and not enough transient memory space is available a SystemException shall be thrown with reason code SystemException.NO_TRANSIENT_SPACE.
- CRRC2: If event is JCSystem.CLEAR_ON_DESELECT and the applet is not a currently selected applet a SystemException with reason code SystemException.ILLEGAL_TRANSIENT shall be thrown.

5.1.3.2.2 Test area files

Test Source: Test_Api_1_Usy_Getfob.java.

Test Applet: Api_1_Usy_Getfob.java.

Cap File: api_1_usy_getfob.cap.

5.1.3.2.3 Test coverage

CRR number	Test case number
N1	1 to 3
N2	1
N3	1
N4	2
N5	3
N6	2
P1	7
P2	8
C1	5, 6
C2	4

5.1.3.2.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Method returns null		
	1- Install Applet1 with full access rights on the UICC file system		
	2- Invoke the method getTheFileView before the javacard.framework.Applet.register() method invocation	2- returns null	
	3- Envelope menu selection is sent to the UICC	3- applet is triggered	
	4- Invoke the method getTheFileView() with AID = unknown ADF AID	4- returns null	

ld	Description	API Expectation	APDU Expectation
2	Normal execution	-	•
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	Invoke the method getTheFileView() with AID = ADF1 with the event JCSystem.NOT_A_TRANSIENT_OBJECT and stores the result in a class variable	No Exception shall be thrown	
	FV1 Applet1 calls FV1.status() command	Current selected DF is ADF1	
	Select DF _{Test} using FV1 Select EF _{TARU} using FV1Read first 3 bytes using FV1ResetTerminal profile	Expected value is {FF FF FF}	
	2 - Envelope menu selection is sent to the UICC	2- Applet1 is triggered	
	Applet1 calls FV1.status() command		
	Read first 3 bytes using FV1 Applet1 calls FV1.select(0x3F00)	Current selected DF is DF _{Test}	
		Expected value is {FF FF FF}	
	Invoke the method getTheFileView() with the event JCSystem.CLEAR_ON_RESET and stores the result in a class variable FV2 Applet1 calls FV2.status() command	UICCException.FILE_NOT_FOUN D is thrown No exception shall be thrown	
	Select DF_{Test} using FV2 Select EF_{TARU} using FV2 Read first 3 bytes using FV2	Current selected DF is the ADF1	
	Reset Terminal profile 4 - Envelope menu selection is sent to the	Expected value is {FF FF FF}	
	nicc		
	Applet1 calls FV2.status() command	A Ampleté is tripped	
	Read first 3 bytes using FV2	4- Applet1 is triggered	
		Current selected DF is the ADF1	
	Applet1 calls FV2.select(0x3F00)	UICCException. NO_EF_SELECTED	
	5- Select the Applet by AID Invoke the method getTheFileView() with AID = ADF1with theevent:JCSystem.CLEAR_ON_DESELECT and stores the result in a class variable FV3	UICCException.FILE_NOT_FOUN D is thrown	
	Applet1 calls FV3.status() command Select DF _{Test} using FV3 Select EF _{TARU} using FV3	5- Applet1 is selected	
	Read first 3 bytes using FV3	No Exception shall be thrown	
	6- Select the Applet by AID	Current colocted DE is ADE4	
	Applet1 calls FV3.status() command	Current selected DF is ADF1	
	Read first 3 bytes using FV3	Expected value is {FF FF FF}	
	Applet1 calls FV3.select(0x3F00)	6- Applet1 is selected	
		Current selected DF is ADF1	

ld	Description	API Expectation	APDU Expectation
		UICCException.	
		NO_EF_SELECTED	
		UICCException.FILE_NOT_FOUN D is thrown	
3	FileView context independency		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- Check that previous fileviews are different (FV1 != FV2 != FV3)		
	3- Select DF _{Test} /EF _{LARU} using FV1	3- No exception shall be thrown	
	4- Select DF _{Test} /EF _{CARU} using FV2	4- No exception shall be thrown	
	5- Select DF _{Test} /EF _{CARU} using FV3 6- Read record number 1 using FV1 (in	5- A security exception shall be thrown	
	absolute mode) 7- Read record number 2 using FV2 (in	6- Expected value is "55 55 55"	
	absolute mode)	7- Expected value is "AA AA AA"	
4	ILLEGAL_TRANSIENT SystemException	7- Expected value is AA AA AA	
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 calls getTheFileView() method with the event JCSystem.CLEAR_ON_DESELECT	2- SystemException. ILLEGAL_TRANSIENT is thrown	
5	NO_TRANSIENT_SPACE SystemException		
	with CLEAR_ON_RESET FileView object		
	1 Get the available transient memory space using method length=JCSystem.getAvailableMemory(MEMORY_TYPE TRANSIENT RESET)	1- No Exception shall be thrown	
	2- Fill the available transient memory space by creating array, using method JCSystem.makeTransientByteArray(length, JCSystem.CLEAR_ON_RESET)	2- No Exception shall be thrown	
	3- Applet calls method getTheFileView() with AID = ADF1 with event	3- SystemException. NO_TRANSIENT_SPACE is thrown	
	JCSystem.CLEAR_ON_RESET		
	4- Reset		
6	NO_TRANSIENT_SPACE SystemException with CLEAR_ON_DESELECT FileView object		
	1 - Select the Applet by AID	1- Applet1 is triggered	
	2- Get the available transient memory space using method	2- No Exception shall be thrown	
	<pre>length=JCSystem.getAvailableMemory(MEMORY_ TYPE_TRANSIENT_DESELECT)</pre>		
	3- Fill the available transient memory space by creating array, using method JCSystem.makeTransientByteArray(length, JCSystem.CLEAR_ON_DESELECT) }	3- No Exception shall be thrown	
	4- Applet calls method getTheFileView() with AID = ADF1 with event:		
	JCSystem.CLEAR_ON_DESELECT	4- SystemException. NO_TRANSIENT_SPACE is thrown	

ld	Description	API Expectation	APDU Expectation
7	ILLEGAL_VALUE SystemException		
	1- Invoke the method getTheFileView() with	1-	
	event different from 0,1,2	SystemException.ILLEGAL_VALU	
		E is thrown	
8	NullPointerException		
	Invoke the method getTheFileView() with AID = NULL with event: 1 - JCSystem.CLEAR_ON_RESET	1- Shall be thrown java.lang.NullPointerException	

5.1.3.3 Method getTheFileView

Test Area Reference: Api_1_Usy_Getf_Bsbb.

5.1.3.3.1 Conformance requirement:

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

5.1.3.3.1.1 Normal execution

- CRRN1: returns a reference to class which implements the FileView interface on an ADF file system defined by its AID contains in buffer parameter.
- CRRN2: returns null if the ADF with the full AID given in the buffer does not exist.
- CRRN3: returns null if one of the javacard.framework.Applet.register(..) method has not previously invoked by the applet invoking this method or the filesystem server does not exist or the filesystem server returns null.
- CRRN4: After a successful invocation of the method the ADF is the currently selected file.
- CRRN5: A separate and independent file context shall be associated with each and every FileView object: the operation performed on files in a given FileView object shall not affect the file context associated with any other FileView object. This context can be transient or persistent depending on what was required by the Applet during the creation of the FileView object.
- CRRN6: It is not possible to access files which are not located under the ADF.

5.1.3.3.1.2 Parameters error

- CRRP1: If event is not one of the following values JCSystem.NOT_A_TRANSIENT_OBJECT, JCSystem.CLEAR_ON_DESELECT, or JCSystem.CLEAR_ON_RESET a SystemException is thrown. The value of the SystemException shall be SystemException.ILLEGAL_VALUE.
- CRRP2: If the buffer is null a NullPointerException shall be thrown.
- CRRP3: If bOffset is less than 0, an instance ArrayIndexOutOfBoundException shall be thrown.
- CRRP4: if bOffset plus bLength is greater than the length of the array buffer.length, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP5: if bLength is not in the range of 5 16 bytes a SystemException.ILLEGAL_VALUE shall be thrown.

5.1.3.3.1.3 Context errors

- CRRC1: If event is JCSystem.CLEAR_ON_RESET or JCSystem.CLEAR_ON_DESELECT and not enough transient memory space is available a SystemException shall be thrown with reason code SystemException.NO_TRANSIENT_SPACE.
- CRRC2: If event is JCSystem.CLEAR_ON_DESELECT and the applet is not a currently selected applet a SystemException with reason code SystemException.ILLEGAL_TRANSIENT shall be thrown.

5.1.3.3.2 Test area files

Test Source: Test_Api_1_Usy_Getf_Bsbb.java.

Test Applet: Api_1_Usy_Getf_Bsbb.java.

Cap File: api_1_usy_getf_bsbb.cap.

5.1.3.3.3 Test coverage

CRR number	Test case number
N1	2
N2	1
N3	2
N4	2
N5	3
N6	2
P1	7
P2	8
P3	9
P4	9
P5	10
C1	5, 6
C2	4

5.1.3.3.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Method returns null		
	1- Install Applet1 with full access rights on the UICC file system		
	2- Invoke the method getTheFileView before the javacard.framework.Applet.register() method invocation Invoke the method getTheFileView() with buffer[20] = {ADF1,} bOffset= 0 bLength= 16	2- returns null	
	3- Envelope menu selection is sent to the UICC	3- Applet is triggered	
	4- Invoke the method getTheFileView before the javacard.framework.Applet.register() method invocation Invoke the method getTheFileView() with buffer[20] = null	4- returns null	
	boffset= 0 bLength= 16		

ld	Description	API Expectation	APDU Expectation
2	Normal execution	·	•
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	<pre>Invoke the method getTheFileView() with buffer[20] = {ADF1,} bOffset= 0 bLength= 16 JCSystem.NOT_A_TRANSIENT_OBJECT</pre>	No Exception shall be thrown	
	and stores the result in a class variable FV1		
	Applet1 calls FV1.status() command	Current selected DF is ADF1	
	Select DF _{Test} using FV1 Select EF _{TARU} using FV1 Read first 3 bytes using FV1	Expected value is {FF FF FF}	
	Reset Terminal profile		
	2 - Envelope menu selection is sent to the UICC	2- Applet1 is triggered	
	Applet1 calls FV1.status() command	Current selected DF is DF _{Test}	
	Read first 3 bytes using FV1	Expected value is {FF FF FF}	
	Applet1 calls FV1.select(0x3F00)	UICCException.FILE_NOT_FOUN D is thrown	
	Invoke the method getTheFileView() with the event JCSystem.CLEAR_ON_RESET and stores the result in a class variable FV2	No exception shall be thrown	
	Applet1 calls FV2.status() command	Current selected DF is ADF1	
	Select DF_{Test} using FV2 Select EF_{TARU} using FV2 Read first 3 bytes using FV2	Expected value is {FF FF FF}	
	Reset Terminal profile		
	4 - Envelope menu selection is sent to the UICC	4- Applet1 is triggered	
	Applet1 calls FV2.status() command	Current selected DF is ADF1	
	Read first 3 bytes using FV2	UICCException. NO_EF_SELECTED	
	Applet1 calls FV2.select(0x3F00)	UICCException.FILE_NOT_FOUN D is thrown	
	5- Select the Applet by AID Invoke the method getTheFileView() with AID = ADF1 with buffer[20] = {ADF1,} bOffset= 0 bLength= 16 blength= 16System CLEAR ON DESELECT and	5- Applet1 is selected No Exception shall be thrown	
	the event:JCSystem.CLEAR_ON_DESELECT and stores the result in a class variable FV3		
	Applet1 calls FV3.status() command Select DF _{Test} using FV3 Select EF _{TARU} using FV3	Current selected DF is ADF1	
	Read first 3 bytes using FV3	Expected value is {FF FF FF}	
	6- Select the Applet by AID Applet1 calls FV3.status() command Read first 3 bytes using FV3	6- Applet1 is selected Current selected DF is ADF1 UICCException. NO_EF_SELECTED	
	Applet1 calls FV3.select(0x3F00)		

ld	Description	API Expectation	APDU Expectation
		UICCException.FILE_NOT_FOUN	
		D is thrown	
3	FileView context independency		
	I no view context independency		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- Check that previous fileviews are different (FV1 != FV2 != FV3)		
	3- Select DF_{Test}/EF_{LARU} using FV1	3- No exception shall be thrown	
	4- Select $\mathrm{DF_{Test}/EF_{CARU}}$ using FV2	4- No exception shall be thrown	
	5- Select $\mathrm{DF_{Test}/EF_{CARU}}$ using FV3	5- A security exception shall be	
	6- Read record number 1 using FV1 (in absolute mode)	thrown	
	7- Read record number 2 using FV2 (in	6- Expected value is "55 55 55"	
	absolute mode)		
		7- Expected value is "AA AA AA"	
4	ILLEGAL_TRANSIENT SystemException		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	<pre>2- Applet1 calls getTheFileView() method with buffer[20] = {ADF1,} boffset= 0 bLength= 16</pre>	2- SystemException. ILLEGAL_TRANSIENT is thrown	
	with the event JCSystem.CLEAR ON DESELECT		
5	NO_TRANSIENT_SPACE SystemException with CLEAR_ON_RESET FileView object		
	1 Get the available transient memory space using method length=JCSystem.getAvailableMemory(MEMORY_TYPE_TRANSIENT_RESET)	1- No Exception shall be thrown	
	2- Fill the available transient memory space by creating array, using method JCSystem.makeTransientByteArray(length, JCSystem.CLEAR_ON_RESET)	2- No Exception shall be thrown	
	<pre>3- Applet calls method getTheFileView() with buffer[20] = {ADF1,} b0ffset= 0 bLength= 16 with the event JCSystem.CLEAR_ON_RESET 4- Reset</pre>	3- SystemException. NO_TRANSIENT_SPACE is thrown	

ld	Description	API Expectation	APDU Expectation
6	NO_TRANSIENT_SPACE SystemException	Ai i Expediation	AI DO EXPECTATION
"	with CLEAR_ON_DESELECT FileView object		
	1 - Select the Applet by AID	1- Applet1 is triggered	
	2- Get the available transient memory space using method	2- No Exception shall be thrown	
	<pre>length=JCSystem.getAvailableMemory(MEMORY_ TYPE_TRANSIENT_DESELECT)</pre>		
	3- Fill the available transient memory space by creating array, using method JCSystem.makeTransientByteArray(length, JCSystem.CLEAR_ON_DESELECT) }	3- No Exception shall be thrown	
	4- Applet calls method getTheFileView() with buffer[20] = {ADF1,} bOffset= 0 bLength= 16	4- SystemException. NO_TRANSIENT_SPACE is thrown	
	with event: JCSystem.CLEAR ON DESELECT		
7	ILLEGAL_VALUE SystemException		
	<pre>1- Invoke the method getTheFileView() with event different from 0,1,2</pre>	1- SystemException.ILLEGAL_VALU E is thrown	
8	NullPointerException		
	Invoke the method getTheFileView() with buffer[20] = null bOffset= 0 bLength= 16 with event: 1 - JCSystem.CLEAR_ON_RESET	1- Shall be thrown java.lang.NullPointerException	
9	ArrayIndexOutOfBoundsException		
	,		
	1-Envelope menu selection is sent to the	1- Applet1 is triggered	
	UICC	Oh all has the assess	
	<pre>Invoke the method getTheFileView() with buffer[20] = {ADF1,} bOffset= 5</pre>	Shall be thrown ArrayIndexOutOfBoundsException	
	bLength= 16 event =JCSystem. CLEAR_ON_RESET		
	<pre>Invoke the method getTheFileView() with buffer[20] = {ADF1,} bOffset= -1 bLength= 16</pre>	Shall be thrown ArrayIndexOutOfBoundsException	
	event =JCSystem. CLEAR ON RESET	,	
10	SystemException.ILLEGAL_VALUE		
	1-Envelope menu selection is sent to the UICC		
	<pre>Invoke the method getTheFileView() with buffer[20] = {ADF1,}</pre>	1- Applet1 is triggered	
	boffset= 0 bLength= 4	SystemException.ILLEGAL_VALU E shall be thrown	
	event =JCSystem. CLEAR_ON_RESET		
	<pre>Invoke the method getTheFileView() with buffer[20] = {ADF1,} bOffset= 0</pre>		
	bLength= 17 event =JCSystem. CLEAR_ON_RESET	SystemException.ILLEGAL_VALU E shall be thrown	

5.1.4 Interface UICCException

5.1.4.1 Constructor

Test Area Reference: Api_1_Uex_Coor.

5.1.4.1.1 Conformance Requirement:

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

5.1.4.1.1.1 Normal execution

• CRRN1: Construct an UICCException with the specified reason.

5.1.4.1.1.2 Parameter errors

No requirements.

5.1.4.1.1.3 Context errors

No requirements.

5.1.4.1.2 Test suite files

Test Source: Test_Api_2_Uex_Coor.java.

Test Applet: Api_2_Uex_Coor_1.java.

Cap File: api_2_uex_coor.cap.

5.1.4.1.3 Test Coverage

CRR number	Test case number
N1	1

5.1.4.1.4 Test Procedure

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

5.1.4.2 Method throwlt

Test Area Reference: Api_1_Uex_Thit.

5.1.4.2.1 Conformance Requirement:

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

5.1.4.2.1.1 Normal execution

- CRRN1: Throws the JCRE owned instance of UICCException with the specified reason.
- CRRN2: extends javacard.framework.CardRuntimeException.

5.1.4.2.1.2 Parameter errors

No requirements.

5.1.4.2.1.3 Context errors

No requirements.

5.1.4.2.2 Test area files

Test Source: Test_Api_2_Uex_Thit.java.

Test Applet: Api_2_Uex_Thit_1.java.

Cap File: api_2_uex_thit.cap.

5.1.4.2.3 Test Coverage

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

5.1.4.2.4 Test Procedure

ld	Description	API Expectation	APDU Expectation
1	Throws the JCRE instance of UICCException with	Reason = 0	
	the specified reason		
2	Throws the JCRE instance of UICCException with	Reason = 1	
	the specified reason		
3	Throws the JCRE instance of UICCException with	Reason = 0xA55A	
	the specified reason		
4	UICCException extends	Reason = 0	
	javacard.framework.CardRuntimeException		
5	UICCException extends	Reason = 1	
	javacard.framework.CardRuntimeException		
6	UICCException extends	Reason = 0xA55A	
	javacard.framework.CardRuntimeException		

5.1.4.3 Reason Codes

This part contain only constant defined for the available reason code. No test of constants will be performed.

5.1.5 Contexts

5.1.5.1 Context tests

Test Area Reference: Api_1_Cont

5.1.5.1.1 Conformance requirement

5.1.5.1.1.1 Normal execution

- CRRN1: A file (EF, DF or ADF) can be accessed (selected, read, updated, deleted, deactivated, activated, increased, searched, resized) concurrently by different UICC-based applications such as toolkit applications.
- CRRN2: A file (EF, DF or ADF) created by a FileView can be accessed by other applications and vice versa.
- CRRN3: If a file is indicated as shareable (in the file descriptor byte in the FCP), then applications may perform authorized operations (selected, read, updated, deleted, deactivated, activated, increased, searched, resized, deleted) on the file independently of whether or not the file is the current file of any other application. A consequence is that if changes to a shareable file are permitted by the file's security conditions, then the file can be changed by one application while it is currently selected and being used by a second application.
- CRRN4: If a file is indicated as non-shareable and is the current file of one application, then another application cannot perform any operation on the file regardless of authorization. A consequence is that an application acquires exclusive access to a not-shareable file by successfully selecting it. Access by any other application, including an attempt to select the file, shall return an error indication.
- CRRN5: Concurrent access to a file by two executing instances of a single application is considered to be accessed by two different applications.

5.1.5.1.1.2 Parameter errors

No requirements.

5.1.5.1.1.3 Context errors

No requirements.

5.1.5.1.2 Test area files

Test Source: Api_1_Cont.java.

Test Applet: Api_1_Cont _1.java.

Cap File: api_1_cont.cap.

5.1.5.1.3 Test coverage

CRR number	Test case number
N1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
N2	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
N3	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
N4	11, 12, 13, 14, 15, 16
N5	1 2 3 4 5 6 7 8 9 10

5.1.5.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0			
	1- Select DF TELECOM		
	2- Trigger applet		
	3- Applet gets object UICCFileView1 using getTheUICCView()		
	4- Applet gets object UICCFileView2 using getTheUICCView()		
	5- Applet gets object ADF1FileView1 using getTheFileView()		
	6- Applet gets object ADF1FileView2 using getTheFileView()		
	7- Applet gets object UICCAdminFileView1 using getTheUICCAdminFileView () 8- Applet gets object UICCAdminFileView2 using getTheUICCAdminFileView () 9- Applet gets object ADF1AdminFileView1 using getTheAdminFileView () 10- Applet gets object ADF1AdminFileView2		
	using getTheAdminFileView ()		
1	Select and status		
	1- UICCFileView1.select() DF _{TEST}		
	UICCFileView1.select() EF _{TARU} ,	2-	
	2- UICCFileView1.select() ADF1	UICCException.FILE_NOT_FOUN D is thrown	
	3- UICCFileView2.select() EF _{UICC} , 4- UICCFileView2.select() ADF1	4-	
	5- ADF1FileView1.select() DF _{TELECOM} , 6- ADF1FileView1.select() MF	UICCException.FILE_NOT_FOUN D is thrown	
	7- ADF1FileView2.select() DF _{TEST} , ADF1FileView2.select() DF _{SUB_TEST} 8- ADF1FileView2.select() MF	0- UICCException.FILE_NOT_FOUN D is thrown	
	abilitieviewz.serece() m	8- UICCException.FILE_NOT_FOUN D is thrown	
	9- UICCFileView1.status()		
	10- UICCFileView2. status()	9- FCP corresponding to DF _{TEST} (under MF) is returned	
	11- ADF1FileView1. status()	10- FCP corresponding to MF is returned	
	12- ADF1FileView2. status()	11- FCP corresponding to DF _{TELECOM} (under ADF1) is returned	
	13- Status	Totalilou	
		12- FCP corresponding to DF _{SUB_TEST} (under ADF1) is returned	
		Applet finalizes	13- FCP corresponding to DF _{TELECOM} (under MF) is returned

ld	Description	API Expectation	APDU Expectation
2	Select SFI	·	1
	1- UICCFileView1.select() DF _{TEST} , UICCFileView1.select() EF _{TNR} with SFI 01, UICCFileView1.deactivate()	1- No exception is thrown	
	2- UICCFileView1.select() SFI 06	2- UICCException.FILE_NOT_FOUN D is thrown	
	3- UICCFileView2.select() DF _{TEST} , UICCFileView2.select() EF _{TARU} with SFI 03, UICCFileView2.updateBinary() 01 01	3- No exception is thrown	
	4- UICCFileView2.select() SFI 08	4- UICCException.FILE_NOT_FOUN	
	5- ADF1FileView1.select() DF _{TEST} , ADF1FileView1. select() EF _{CNR} with SFI 04, ADF1FileView1.deactivate()	D is thrown 5- No exception is thrown	
	6- ADF1FileView1.select() SFI 06	6-	
	7- ADF1FileView2.select() DF _{TEST} , ADF1FileView2.select() EF _{TARU} with SFI 03, ADF1FileView2.updateBinary() 02 02	UICCException.FILE_NOT_FOUN D is thrown	
	8- ADF1FileView2.select() SFI 08	7- No exception is thrown	
	9- select DF $_{\text{TEST}},$ select EF $_{\text{TNR}}$ 10- activate	8- UICCException.FILE_NOT_FOUN D is thrown	10- SW=90 00
	11- select DF _{TEST} , select EF _{TARU} 12- readBinary 13- updateBInary FF FF FF	Applet finalizes	10- 300 = 90 00
	14- select AID of ADF1, select DF $_{\mbox{\scriptsize TEST}},$ select EF $_{\mbox{\scriptsize CNR}}$ 15- activate		12- Returns 01 01
	16- select EF _{TARU} , 17- readBinary 18- updateBInary FF FF FF		15- SW=90 00 17- Returns 02 02
3	ReadBinary and updateBinary		
	1- Reset		
	2- Trigger the applet		
	3- UICCFileView1.select() DF _{TEST} , UICCFileView1.select() EF _{TARU} , UICCFileView1.updateBinary() 01 01 01 01, offset 0		
	4- UICCFileView1.readBinary(), offset 0	3- No exception is thrown	
	5- UICCFileView2.select() DF _{TEST} , UICCFileView2.select() EF _{TARU} , UICCFileView2.updateBinary() 02 02, offset	4- Returns 01 01 01 01	
	6- UICCFileView2.readBinary(), offset 0	5- No exception is thrown	
	7- ADF1FileView1.select() DF _{TEST,} ADF1FileView1.select() EF _{TARU,}	6- Returns 01 01 02 02	
	ADF1FileView1.updateBinary() 03 03 03 03, offset 0	7- No exception is thrown	
	8- ADF1FileView1.readBinary(), offset 0		

ld	Description	API Expectation	APDU Expectation
	·	·	•
	9- ADF1FileView2.select() DF _{TEST,} ADF1FileView2.select() EF _{TARU,} ADF1FileView2.updateBinary() 04 04, offset 2	8- Returns 03 03 03 03	
	10- ADF1FileView2.readBinary(), offset 0	9- No exception is thrown	
	11- select DF $_{\mbox{\scriptsize TEST}},$ select EF $_{\mbox{\scriptsize TARU}},$ readBinary	10- Returns 03 03 04 04	44. Poturno 04 04 02 02
	12- updateBInary FF FF FF	Applet finalizes	11- Returns 01 01 02 02
	13- select AID of ADF1, select DF $_{\mbox{\scriptsize TEST}},$ select EF $_{\mbox{\scriptsize TARU}},$ readBinary		
	14- updateBInary FF FF FF		13- Returns 03 03 04 04
4	SearchRecord		
	1- Reset		
	2- Trigger the applet		
	3- UICCFileView1.select() DF _{TEST} , UICCFileView1.select() EF _{LUPC} , UICCFileView1.searchRecord() 22 22 22 22 22 22 22 22 22 22 22 22 22	3- returns 2	
	4- UICCFileView1.updateRecord() current 33 33 33 33 33 33 33 33 33 33	4- No exception is thrown	
	5- UICCFileView2.select() DF _{TEST,} UICCFileView2.select() EF _{LUPC,} UICCFileView2. readRecord() current	5- UICCException.RECORD_NOT_F OUND is thrown	
	6- UICCFileView2.searchRecord() 22 22 22 22 22 22 22 22 22 22 22 22 22	6- returns 0	
		7- returns 2	
	7- UICCFileView2.searchRecord() 33 33 33 33 33 33 33 33 33 33	8- returns 0	
	8- ADF1FileView1.select() DF _{TEST} , ADF1FileView1.select() EF _{LUPC} , ADF1FileView1.searchRecord() 33 33 33 33 33 33 33 9- ADF1FileView1.searchRecord() 22 22 22 22 22 22 22 22 22	9- returns 2	
	10- ADF1FileView1.updateRecord() current 11 11 11 11 11 11 11 11 11	10- No exception is thrown	
	11- ADF1FileView2.select() DF _{TEST} , ADF1FileView2.select() EF _{LUPC} , ADF1FileView2.searchRecord() 22 22 22 22 22 22 22 22 22 22 22 22 22	11- returns 0	
	12- ADF1FileView2.searchRecord() 11 11 11 11 11 11 11 11 11 11	12- returns 1 and 2 Applet finalizes	
	13- select DF $_{\text{TEST}}$, select EF $_{\text{LUPC}}$, readRecord 01		13- returns 11 11 11 11 11 11 11 11 11 11
	14- readRecord 02		14- returns 33 33 33 33 33
	15- updateRecord 01, 11 11 11 11 11 11 11 11 11 11 11 11 1		33 33 33 33 33 33 33 33 33 33
	22 22 22 17- select AID of ADF1, select DF $_{\mbox{\scriptsize TEST}},$ select EF_LUPC, readRecord 01		17- returns 11 11 11 11 11

ld	Description	API Expectation	APDU Expectation
	18- readRecord 02		11 11 11 11 11
	19- updateRecord 01 11 11 11 11 11 11 11 11 11 11 11 11		18- returns 11 11 11 11 11 11 11 11 11 11 11 11 11
	20- updateRecord 02 22 22 22 22 22 22 22 22 22 22 22 22		
5	readRecord and updateRecord		
	1- Reset		
	2- Trigger the applet		
	3- UICCFileView1.select() DF _{TEST} , UICCFileView1.select() EF _{LARU} , UICCFileView1.updateRecord() 66 66 66 66, next	3- No exception is thrown	
	<pre>4- UICCFileView1.readRecord(), current 5- UICCFileView1.readRecord(), next</pre>	4- returns 66 66 66 66 5- returns AA AA AA	
	6- UICCFileView2.select() DF _{TEST,} UICCFileView2.select() EF _{LARU,} UICCFileView2.readRecord(), current	6- UICCException.RECORD_NOT_F OUND is thrown	
	7- UICCFileView2.updateRecord() BB BB BB BB, record 2	7- No exception is thrown	
	8- UICCFileView2.readRecord(), next 9- UICCFileView2.readRecord(), next	8- returns 66 66 66 9- returns BB BB BB BB	
	10- ADF1FileView1.select() DF _{TEST} , ADF1FileView1.select() EF _{LARU} , ADF1FileView1.updateRecord() 44 44 44 44, next	10- No exception is thrown	
	<pre>11- ADF1FileView1.readRecord(), current 12- ADF1FileView1.readRecord(), next</pre>	11- returns 44 44 44 44 12- returns AA AA AA AA	
	13- ADF1FileView2.select() DF _{TEST,} ADF1FileView2.select() EF _{LARU,} ADF1FileView2.readRecord(), current	13- UICCException.RECORD_NOT_F OUND is thrown	
	14- ADF1FileView2.updateRecord() 99 99 99 99, record 2	14- No exception is thrown	
	<pre>15- ADF1FileView2.readRecord(), next 16- ADF1FileView2.readRecord(), next</pre>	15- returns 44 44 44 44 16- returns 99 99 99 Applet finalizes	
	17- select DF $_{\mbox{\scriptsize TEST}},$ select EF $_{\mbox{\scriptsize TARU}},$ readRecord next		17- returns 66 66 66 66
	18- readRecord next		18- returns BB BB BB BB
	19- updateRecord record 1, 55 55 55 55 20- updateRecord record 2, AA AA AA AA		
	21- select AID of ADF1, select DF $_{\scriptsize TEST},$ select EF $_{\scriptsize LARU},$ readRecord next		21- returns 44 44 44 44
	22- readRecord next		22- returns 99 99 99 99
	23- updateRecord record 1, 55 55 55 55 24- updateRecord record 2, AA AA AA AA		

ActivateFile and deactivateFile 1- Reneat 2- Trigger the applet 3- UTCCP1eVisval.select() BFmax. BUTCCP1eVisval.select() BFmax. BUTCP1eVisval.select() BF	ld	Description	API Expectation	APDU Expectation
2- Trigger the applet 3- UICCF11eView1.select() DFram. UICCF11eView2.select() DFram. UICCF11eView2.select() DFram. UICCF11eView2.select() DFram. UICCF11eView2.select() DFram. UICCF11eView2.readSinary() 5- UICCF11eView2.readSinary() 6- UICCF11eView2.readSinary() 7- ADDFF11eView1.readSinary() 9- ADDFF11eView2.select() EFram. ADDFF11eView2.readSinary() 10- ADFF11eView2.readSinary() 11- select.DFram. ADFF11eView2.readSecord() 00 00 00, previous 12- activate 13- select AID of ADF1, select DFram. UICCF11eView1.select() EFram. UICCF11eView2.readSecord(), current 6- UICCF11eView2.readSecord(), current 6- UICCF11eView2.readSecord(), current 6- UICCF11eView2.readSecord(), current 10- UICCF11eView2.readSecord(), current 11- SW = 62 83 12- SW = 90 00 13- ADFF11eView2.readSecord()			7 ii i Expositation	7 ii 20 Zapootation
2- Trigger the applet 3- UICCF11eView1.select() DFram. UICCF11eView2.select() DFram. UICCF11eView2.select() DFram. UICCF11eView2.select() DFram. UICCF11eView2.select() DFram. UICCF11eView2.readSinary() 5- UICCF11eView2.readSinary() 6- UICCF11eView2.readSinary() 7- ADDFF11eView1.readSinary() 9- ADDFF11eView2.select() EFram. ADDFF11eView2.readSinary() 10- ADFF11eView2.readSinary() 11- select.DFram. ADFF11eView2.readSecord() 00 00 00, previous 12- activate 13- select AID of ADF1, select DFram. UICCF11eView1.select() EFram. UICCF11eView2.readSecord(), current 6- UICCF11eView2.readSecord(), current 6- UICCF11eView2.readSecord(), current 6- UICCF11eView2.readSecord(), current 10- UICCF11eView2.readSecord(), current 11- SW = 62 83 12- SW = 90 00 13- ADFF11eView2.readSecord()				
JuccFleView1.select() DFram, UrccFleView1.select() BFase, UrccFleView2.select() BFase, UrccFleView2.select() BFase, UrccFleView2.select() BFase, UrccFleView2.readBinary()		1- Reset		
UICCF1leViex1.select() EFpmm		2- Trigger the applet		
UICCF1leViex1.select() EFpmm		3- UICCFileView1 select() DE		
4- UICCFileView2.select() PPmm, UICCFileView2.select() PPmm, UICCFileView2.readBinary() 5- UICCFileView2.deactivate(), UICCFileView2.readBinary() 6- UICCFileView2.deactivate() 7- ADPIFILeView1.deactivate() 7- ADPIFILeView1.deactivate() 9- ADPIFILeView2.select() PPmm, ADPIFILeView2.select() PPmm, ADPIFILeView2.select() PPmm, ADPIFILeView2.readBinary() 10- ADFIFILeView2.readBinary() 11- select DF mm, select EPmm ADPIFILeView2.readBinary() 11- select ATD of ADF1, select DF mm, select EPmm 12- activate 13- select ATD of ADF1, select DF mm, uICCFileView1.readBeacord() 00 00 00, previous 1- UICCFileView1.readRecord() 00 00 00, previous 4- UICCFileView1.readRecord() 00 00 00, previous 4- UICCFileView1.readRecord(), previous 7- UICCFileView2.select() PPmm, UICCFileView2.select() PPmm, UICCFileView2.readRecord(), previous 10- UICCFileView2.readRecord(), previous 11- ADPFIIleView1.readRecord(), previous 12- ADPFIIleView1.readRecord() 00 00 00, previous 13- ADPFIIleView1.readRecord() 00 00 00, previous 14- ADPFIIleView1.readRecord() 00 00 00, previous 15- ADPFIIleView1.readRecord() 00 00 00, previous 16- ADPFIIleView1.readRecord() 00 00 00, previous 17- ADPFIIleView1.readRecord() 00 00 00, previous 18- ADPFIIleView1.readRecord() 00 00 00, previous 19- ADPFIIleView2.readRecord() 00 00 00, previous 19- ADPFIIleView1.readRecord(3- No exception is thrown	
UICCF1leView2.ealect() SFggg, UICCF1leView2.activate(), UICCF1leView2.activate(), UICCF1leView2.activate(), UICCF1leView2.deactivate() 6- UICCF1leView2.deactivate() 7- ADPIFIleView1.ealect() SFggg, ADPIFIleView1.ealect() SFggg, ADPIFIleView2.ealedinary() 8- ADFIFIleView2.ealedinary() 9- ADFIFIleView2.ealedinary() 10- ADFIFIleView2.readBinary() 11- select DF msm, select SFggg, 12- activate 12- activate 13- select AID of ADF1, select DF msm, select BFgg, UICCF1leView2.ealedinary() 13- SW = 90 00 7- UICCF1leView1.ealedecod(), previous UICCF1leView1.updateRecord() 00 00 00, previous UICCF1leView2.readBecord(), current 8- UICCF1leView2.readBecord(), current 9- UICCF1leView2.readBecord(), current 10- UICCF1leView1.updateBecord() 00 00 00, previous 11- ADFIFILeView1.updateBecord() 00 00 00, previous 12- ADFIFILeView1.increase(), 00 00 01 13- ADFIFILeView1.increase(), 00 00 02 14- ADFIFILeView1		UICCFileView1.deactivate()		
UICCF1leView2.ealect() SFggg, UICCF1leView2.activate(), UICCF1leView2.activate(), UICCF1leView2.activate(), UICCF1leView2.deactivate() 6- UICCF1leView2.deactivate() 7- ADPIFIleView1.ealect() SFggg, ADPIFIleView1.ealect() SFggg, ADPIFIleView2.ealedinary() 8- ADFIFIleView2.ealedinary() 9- ADFIFIleView2.ealedinary() 10- ADFIFIleView2.readBinary() 11- select DF msm, select SFggg, 12- activate 12- activate 13- select AID of ADF1, select DF msm, select BFgg, UICCF1leView2.ealedinary() 13- SW = 90 00 7- UICCF1leView1.ealedecod(), previous UICCF1leView1.updateRecord() 00 00 00, previous UICCF1leView2.readBecord(), current 8- UICCF1leView2.readBecord(), current 9- UICCF1leView2.readBecord(), current 10- UICCF1leView1.updateBecord() 00 00 00, previous 11- ADFIFILeView1.updateBecord() 00 00 00, previous 12- ADFIFILeView1.increase(), 00 00 01 13- ADFIFILeView1.increase(), 00 00 02 14- ADFIFILeView1		4- UICCFileView2.select() DFTEST	4-	
UICCFIleView2.readshary() 5. UICCFileView2.readshary() 6. UICCFileView2.readshary() 6. UICCFileView2.deactivate() 7. ADPIFILeView1.select() DFmsr. ADPIFILeView1.select() DFmsr. ADPIFILeView1.select() DFmsr. ADPIFILeView1.select() DFmsr. ADPIFILeView2.readshary() 8. No exception is thrown 7. returns 55 55 55 8. No exception is thrown 9. UICCException.REF_DATA_INVAL_IDATED is thrown ADPIFILeView2.readshary() 10. ADPIFILeView2.readshary() 11. select DF msr. select AID of ADPI, select DF msr. select EFmsp 12. activate 13. select AID of ADPI, select DF msr. select EFmsp 13. select AID of ADPI, select DF msr. select EFmsp 14. Reset 2. Trigger the applet 3. UICCFileView1.select() DFmsr. UICCFileView1.increase() 00 00 00, previous UICCFileView1.readRecord() current 6. UICCFileView1.readRecord(), current 6. UICCFileView2.readRecord(), current 7. UICCFileView2.readRecord(), current 8. UICCFileView2.readRecord(), current 9. UICCFileView2.readRecord(), current 10. UICCFileView2.readRecord(), current 11. ADPIFILeView1.select() DFmsr. ADPIFILeView1.select() EFmsr. ADPIFILeView1.selec		UICCFileView2.select() EF _{TNU}		
### Outcompleted by the control of t		<pre>UICCFileView2.readBinary()</pre>		
6- No exception is thrown 7- returns 55 55 55 7- ADPIFILEView1.select() DFram. ADPIFILEView1.select() DFram. ADPIFILEView1.select() DFram. ADPIFILEView1.deactivate() 9- ADPIFILEView2.readBinary() 10- ADPIFILEView2.readBinary() 11- select DF ram., select EFram. 12- activate 13- select AID of ADFI, select DF ram., select EFram. 12- activate 13- select AID of ADFI, select DF ram., select EFram. 12- activate 13- select AID of ADFI, select DF ram., select EFram. 10- returns 55 55 55 Applet finalizes 11- SW = 62 83 12- SW = 90 00 7- Increase 1- Reset 2- Trigger the applet 3- UICCFileView1.select() DFram., uICCFileView1.select() EFram. UICCFileView1.updateRecord() 00 00 00, previous 4- UICCFileView1.readRecord(), current 6- UICCFileView2.readRecord(), current 6- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), current 11- ADFIFILeView1.select() DFram. ADFIFILeView1.readRecord(), current 11- ADFIFILeView1.updateRecord() 00 00 00, previous 11- ADFIFILeView1.updateRecord() 00 00 00, APDIFILeView1.readRecord() 00 00 00, APDIFILeView1.readRecord(), current 11- ADFIFILeView1.updateRecord() 00 00 00, APDIFILeView1.readRecord(), current 12- ADFIFILeView1.updateRecord() 00 00 00, APDIFILeView1.readRecord(), current 13- ADFIFILeView1.readRecord(), current 14- ADFIFILeView1.readRecord(), current 15- ADFIFILeView1.readRecord(), current 16- UICCFiception.RECORD_NOT_FOUND is thrown 17- ADFIFILeView1.readRecord(), current 18- ADFIFILeView1.readRecord			5- returns 55 55 55	
6 - UTCCFileView1.select() DFTEET, APPIFILEVIEW1.select() EFFERM, APPIFILEVIEW1.select() EFFERM, APPIFILEVIEW1.readBinary() S - ADFIFILEVIEW2.select() DFTEET, APPIFILEVIEW2.select() DFTEET, APPIFILEVIEW2.readBinary() S - ADFIFILEVIEW2.readBinary() S - S - S - S - S - S - S - S - S - S		UICCFileView2.readBinary()	6. No exception is thrown	
APPIFILEView1.select() BFmm, APPIFILEView2.select() DFmmr, APPIFILEView2.select() DFmmr, APPIFILEView2.select() DFmmr, APPIFILEView2.readBinary() 10- ADPIFILEView2.readBinary() 11- select DF mmr, select EFmm 12- activate 13- select AID of ADPI, select DF mmr, select EFmm 12- activate 13- select AID of ADPI, select DF mmr, select EFmm 12- Trigger the applet 3- UICCFileView1.select() DFmmr, UICCFileView1.updateRecord() 00 00 00, previous UICCFileView1.increase(), 00 00 01 5- UICCFileView1.readRecord(), current 6- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), current 11- ADPIFIIeView1.readRecord(), current 12- ADPIFIIeView1.readRecord(), current 13- ADPIFIIeView1.readRecord(), current 13- ADPIFIIeView1.readRecord(), current 13- ADPIFIIeView1.readRecord(), current 13- ADPIFIIeView1.readRecord(), current 14- ADPIFIIeView1.readRecord(), current 15- ADPIFIIeView1.readRecord(), current 16- UICCFileView2.readRecord(), current 17- UICCException.RECORD_NOT_F OUND is thrown 18- resp[] = 00 00 02 19- returns 00 00 01 11- UICCFileView1.readRecord() 00 00 00, previous 13- ADPIFIIeView1.readRecord() 00 00 00, previous 13- ADPIFIIeView1.readRecord() 00 00 00 14- ADPIFIIeView1.readRecord() 00 00 00 15- UICCFileView2.readRecord() 00 00 00 16- UICCFileView3.readRecord() 00 00 00 17- UICCFileView3.readRecord() 00 00 00 18- returns 00 00 01 19- UICCFileView3.readRecord() 00 00 00 19- UICCFileView3.readRecord() 00		6- UICCFileView2.deactivate()		
APPIFILEView1.select() BFmm, APPIFILEView2.select() DFmmr, APPIFILEView2.select() DFmmr, APPIFILEView2.select() DFmmr, APPIFILEView2.readBinary() 10- ADPIFILEView2.readBinary() 11- select DF mmr, select EFmm 12- activate 13- select AID of ADPI, select DF mmr, select EFmm 12- activate 13- select AID of ADPI, select DF mmr, select EFmm 12- Trigger the applet 3- UICCFileView1.select() DFmmr, UICCFileView1.updateRecord() 00 00 00, previous UICCFileView1.increase(), 00 00 01 5- UICCFileView1.readRecord(), current 6- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), current 11- ADPIFIIeView1.readRecord(), current 12- ADPIFIIeView1.readRecord(), current 13- ADPIFIIeView1.readRecord(), current 13- ADPIFIIeView1.readRecord(), current 13- ADPIFIIeView1.readRecord(), current 13- ADPIFIIeView1.readRecord(), current 14- ADPIFIIeView1.readRecord(), current 15- ADPIFIIeView1.readRecord(), current 16- UICCFileView2.readRecord(), current 17- UICCException.RECORD_NOT_F OUND is thrown 18- resp[] = 00 00 02 19- returns 00 00 01 11- UICCFileView1.readRecord() 00 00 00, previous 13- ADPIFIIeView1.readRecord() 00 00 00, previous 13- ADPIFIIeView1.readRecord() 00 00 00 14- ADPIFIIeView1.readRecord() 00 00 00 15- UICCFileView2.readRecord() 00 00 00 16- UICCFileView3.readRecord() 00 00 00 17- UICCFileView3.readRecord() 00 00 00 18- returns 00 00 01 19- UICCFileView3.readRecord() 00 00 00 19- UICCFileView3.readRecord() 00				
ADPIFILEVIEW1. deactivate() 8- ADPIFILEVIEW1. deactivate() 9- ADPIFILEVIEW2. select() DF_mss. ADPIFILEVIEW2. readBinary() 10- ADPIFILEVIEW2. readBinary() 11- select DF _mss, ADPIFILEVIEW2. readBinary() 11- select DF _mss, ADPIFILEVIEW2. readBinary() 11- select DF _mss, select AID of ADPI, select DF _mss, select EF_ms 12- activate 13- select AID of ADPI, select DF _mss, select EF_ms 1- Reset 2- Trigger the applet 3- UICCFILEVIEW1. select() DF_mss, UICCFILEVIEW1. select() DF_mss, UICCFILEVIEW1. updateRecord() 00 00 00, previous UICCFILEVIEW2. readRecord() 00 00 00, previous 4- resp[] = 00 00 01 5- fetums 00 00 01 5- fetums 00 00 01 6- resums 00 00 01 7- UICCFILEVIEW2. readRecord(), current 10- ADPIFILEVIEW1. select() DF_mss, ADPIFILE		12017		
9- ADPIFILEVIEW2.select() DPTENT, ADPIFILEVIEW2.readBinary() 10- ADPIFILEVIEW2.readBinary() 11- select DF TEST, select EPTENT 12- activate 13- select AID of ADPI, select DF TEST, select EPTENT 12- activate 13- select AID of ADPI, select DF TEST, select EPTENT 12- activate 13- select AID of ADPI, select DF TEST, select EPTENT 14- Reset 15- Trigger the applet 16- Reset 17- Trigger the applet 18- UICCFileView1.select() DPTEST, UICCFileView1.select() EPTEST, UICCFileView1.updateRecord() 00 00 00, previous 18- UICCFileView1.readRecord(), current 19- UICCFileView2.select() DPTEST, UICCFileView2.select() DPTEST, UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), current 10- UICCFileView3.select() DPTEST, ADPIFIleView1.select() DFTEST, ADPIFILeView1.			8- No exception is thrown	
9- ADPIFILEVIEW2.select() DPTENT, ADPIFILEVIEW2.readBinary() 10- ADPIFILEVIEW2.readBinary() 11- select DF TEST, select EPTENT 12- activate 13- select AID of ADPI, select DF TEST, select EPTENT 12- activate 13- select AID of ADPI, select DF TEST, select EPTENT 12- activate 13- select AID of ADPI, select DF TEST, select EPTENT 14- Reset 15- Trigger the applet 16- Reset 17- Trigger the applet 18- UICCFileView1.select() DPTEST, UICCFileView1.select() EPTEST, UICCFileView1.updateRecord() 00 00 00, previous 18- UICCFileView1.readRecord(), current 19- UICCFileView2.select() DPTEST, UICCFileView2.select() DPTEST, UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), current 10- UICCFileView3.select() DPTEST, ADPIFIleView1.select() DFTEST, ADPIFILeView1.		8- ADF1FileView1 deactivate()	9-	
Jack Pripileview2.select() DFms., ADPIPileview2.readBinary() 10 - ADPIPileview2.readBinary() 11 - select DF ms., select EFmv 12 - activate 13 - select AID of ADF1, select DF ms., select EFmv 14 - Reset 15 - Trigger the applet 16 - UICCFileView1.select() DFms., UICCFileView1.select() DFms., UICCFileView1.select() DFms., UICCFileView1.readRecord(), current 16 - UICCFileView1.readRecord(), previous 17 - UICCFileView1.readRecord(), current 18 - UICCFileView2.readRecord(), current 19 - UICCFileView2.readRecord(), current 10 - returns 00 00 01 11 - ADFIFileView1.select() DFms., ADFIFileView1.select() DFms., ADFIFileView1.updateRecord(), current 12 - ADFIFileView1.updateRecord(), current 13 - ADFIFileView1.updateRecord(), current 14 - ADFIFileView1.updateRecord(), current 15 - ADFIFileView1.select() DFms., ADFIFileView1.updateRecord(), current 16 - ADFIFileView1.updateRecord(), current 17 - ADFIFileView1.updateRecord(), current 18 - ADFIFileView1.updateRecord(), current 19 - UICCFileView2.readRecord(), current 10 - III - SW = 62 83 11 - SW = 90 00 12 - SW = 90 00 13 - SW = 90 00 13 - No exception is thrown 10 - UICCFileView2.readRecord(), current 15 - returns 00 00 01 16 - returns 00 00 01 17 - returns 00 00 01 18 - resp[] = 00 00 02 19 - returns 00 00 02 10 - returns 00 00 02 11 - ADFIFileView1.updateRecord() 00 00 00, previous 12 - No exception is thrown 13 - No exception is thrown 14 - resp[] = 00 00 02 15 - resp[] = 00 00 02 16 - Resp[] = 00 00 02 17 - returns 00 00 02 18 - resp[] = 00 00 02 19 - returns 00 00 02 10 - returns 00 00 02 11 - ADFIFileView1.readRecord() 00 00 00 12 - returns 00 00 02 13 - resp[] = 00 00 02 14 - ADFIFileView1.readRecord() 00 00 02 15 - Resp[] = 00 00 02 16 - Resp[] = 00 00 02 17 - returns 00 00 02 18 - Resp[] = 00 00 02 19 - returns 00 00 02 10 - returns 00 00 02 11 - Resp[] = 00 00 02 12 - returns 00 00 02		o imilitiovicwi. acadelivate()	~	
ADPIFILEVIEW2.readBinary() 10 - ADPIFILEVIEW2.readBinary() 11 - select DF THET, select EFTHM 12 - activate 13 - select AID of ADF1, select DF THET, select EFTHM 13 - select AID of ADF1, select DF THET, select EFTHM 14 - RESET 15 - RESET 16 - RESET 17 - Tingger the applet 18 - UICCF1leView1.select() DFTHMT, UICCF1leView1.select() EFTHMM, UICCF1leView1.updateRecord() 00 00 00, previous 19 - UICCF1leView1.readRecord(), current 10 - returns 55 55 55 Applet finalizes 11 - SW = 62 83 12 - SW = 90 00 13 - SW = 90 00 13 - SW = 90 00 14 - RESP[] = 00 00 01 15 - FRUMS 00 00 01 16 - FRUMS 00 00 01 17 - FRUMS 00 00 01 18 - RESP[] = 00 00 01 19 - UICCF1leView2.readRecord(), current 10 - UICCF1leView2.readRecord(), current 10 - UICCF1leView2.readRecord(), previous 11 - ADF1F1leView1.select() DFTHMT, ADF1F1leView1.select() DFTHMT, ADF1F1leView1.select() DFTHMT, ADF1F1leView1.updateRecord() 00 00 00, previous 12 - ADF1F1leView1.updateRecord() 00 00 00, previous 13 - ADF1F1leView1.updateRecord(), 00 00 01 14 - ADF1F1leView1.readRecord(), current 15 - RESP[] = 00 00 02 16 - RESP[] = 00 00 02 17 - RESP[] = 00 00 02 18 - RESP[] = 00 00 02 19 - UICCF1leView2.readRecord(), current 10 - UICCF1leView3.readRecord(), current 11 - SW = 62 83 12 - SW = 90 00 13 - SW = 90 00 13 - No exception is thrown 15 - Returns 00 00 01 16 - Returns 00 00 01 17 - RESP[] = 00 00 01 18 - RESP[] = 00 00 02 19 - UICCF1leView3.readRecord() 00 00 00, previous 10 - BTMT				
10- ADFIFILeView2.readBinary() 11- select DF TERT, select EFRUS 12- activate 13- select AID of ADFI, select DF TERT, select EFRUS 12- Reset 13- select AID of ADFI, select DF TERT, select EFRUS 13- SELECT AID of ADFI, select DF TERT, select EFRUS 14- UICCFILEVIEWI.select() DFRUST, UICCFILEVIEWI.select() DFRUST, UICCFILEVIEWI.updateRecord() 00 00 00, previous UICCFILEVIEWI.updateRecord(), current 6- UICCFILEVIEWI.readRecord(), current 6- UICCFILEVIEWI.readRecord(), current 10- UICCFILEVIEW2.readRecord(), current 11- ADFIFILEVIEW1.readRecord(), current 12- ADFIFILEVIEW1.updateRecord() 00 00 00, previous 13- ADFIFILEVIEW1.updateRecord() 00 00 00, previous 13- ADFIFILEVIEW1.increase(),00 00 02 14- ADFIFILEVIEW1.readRecord(), current 12- ADFIFILEVIEW1.readRecord(), current 13- ADFIFILEVIEW1.readRecord() 00 00 02 14- ADFIFILEVIEW1.readRecord(), current 12- ADFIFILEVIEW1.readRecord				
10 - returns 55 55 55 Applet finalizes		•		
Applet finalizes 11- select DF TEST, select EFTEW 12- activate 13- select AID of ADF1, select DF TEST, select EFTEW 13- select EFTEW 12- SW = 90 00 13- SW = 90 00 3- No exception is thrown 10- UICCF1leView1.select() DFTEST, UICCF1leView1.readRecord() out on the control of returns 00 00 01 5- UICCF1leView1.readRecord(), current 6- UICCF1leView2.select() DFTEST, UICCF1leView2.readRecord(), current 10- UICCF1leView2.readRecord(), current 10- UICCF1leView2.readRecord(), current 10- UICCF1leView2.readRecord(), current 11- ADF1F1leView1.select() DFTEST, ADF1F1leView1.readRecord(), current 12- ADF1F1leView1.select() DFTEST, ADF1F1leView1.readRecord(), current 12- ADF1F1leView1.readRecord() on 00 00, previous 13- ADF1F1leView1.updateRecord() 00 00 00, previous 13- ADF1F1leView1.increase(),00 00 02 14- ADF1F1leView1.readRecord(), current 14- returns 00 00 02 15- returns 00 00 02			10- returns 55 55 55	
11- SW = 62 83 12- activate 13- select AID of ADF1, select DF TEST, select EFT SELECT		•		
12- activate 13- select AID of ADF1, select DF TEST, select EFTEND 7		11- select DF $_{ ext{TEST}}$, select $\text{EF}_{ ext{TNU}}$		44 CW 62 02
13- select AID of ADP1, select DF TEST, select EFTEW 13- SW = 90 00		12- activate		11- 3VV = 62 63
Select EF_TRUE		12 colors ATD of ADD1 colors DD		12- SW = 90 00
7 Increase 1- Reset 2- Trigger the applet 3- UICCFileView1.select() DFTERN, UICCFileView1.select() EFCANO, DICCFileView1.select() DFTERN, UICCFileView1.updateRecord() 00 00 00, previous 4- UICCFileView1.updateRecord() 00 00 00, previous 4- UICCFileView1.increase(), 00 00 01 5- UICCFileView1.readRecord(), current 6- UICCFileView2.select() DFTERN, UICCFileView2.select() DFTERN, UICCFileView2.readRecord(), current 8- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), current 10- UICCFileView1.select() DFTERN, ADFIFILeView1.select() DFTERN, ADFIFILeView1.select() DFTERN, ADFIFILeView1.readRecord(), current 12- ADFIFILeView1.readRecord(), current 12- ADFIFILeView1.readRecord(), current 12- ADFIFILeView1.updateRecord() 00 00 00, previous ADFIFILeView1.updateRecord() 00 00 00, previous 13- ADFIFILeView1.increase(),00 00 02 14- ADFIFILeView1.readRecord(), current 13- SERI = 00 00 02 14- RESP[] = 00 00 02				
1- Reset 2- Trigger the applet 3- UICCFileView1.select() DFTEST, UICCFileView1.select() EFCAND, UICCFileView1.updateRecord() 00 00 00, previous 4- UICCFileView1.updateRecord() 00 00 00, previous 4- UICCFileView1.updateRecord(), current 6- UICCFileView1.readRecord(), current 6- UICCFileView2.select() DFTEST, UICCFileView2.readRecord(), current 9- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), current 11- ADF1FileView2.readRecord(), previous 11- ADF1FileView1.select() DFTEST, ADF1FileView1.select() DFTEST, ADF1FileView1.readRecord(), current 12- ADF1FileView1.readRecord(), current 13- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.readRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.increase(),00 00 02 15- RESP[] = 00 00 02 11- UICCException.RECORD_NOT_FOUND is thrown 12- No exception is thrown 12- No exception is thrown 12- No exception is thrown 13- resp[] = 00 00 02 13- resp[] = 00 00 02 13- resp[] = 00 00 02 14- returns 00 00 02 14- returns 00 00 02				13- SW = 90 00
2- Trigger the applet 3- UICCFileView1.select() DFTEST, UICCFileView1.updateRecord() 00 00 00, previous 4- UICCFileView1.updateRecord() 00 00 00, previous 4- UICCFileView1.readRecord(), current 6- UICCFileView1.readRecord(), previous 7- UICCFileView2.select() DFTEST, UICCFileView2.select() EFCANU, UICCFileView2.readRecord(), current 8- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADF1FileView1.select() DFTEST, ADF1FileView1.select() DFTEST, ADF1FileView1.readRecord(), current 12- ADF1FileView1.readRecord(), current 12- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 13- Tesp[] = 00 00 02 14- RDF1FileView1.increase(),00 00 02 14- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 13- Tesp[] = 00 00 02 14- RDF1FileView1.readRecord(), current 13- Tesp[] = 00 00 02 14- RDF1FileView1.readRecord(), current 13- Tesp[] = 00 00 02 14- RDF1FileView1.readRecord(), current 13- RDF1FileView1.readRecord(), current 14- resp[] = 00 00 01 5- returns 00 00 01 6- returns 00 00 00 7- UICCException.RECORD_NOT_F OUND is thrown 11- ADF1FileView1.updateRecord() 00 00 00, previous 13- RDF1FileView1.increase() 00 00 02 14- RDF1FileView1.readRecord() 00 00 02 14- RDF1FileView1.readRecord() 00 00 02 14- RDF1FileView1.readRecord() 00 00 02	7	Increase		
3- UICCFileView1.select() DFTEST, UICCFileView1.select() EFCAND, UICCFileView1.updateRecord() 00 00 00, previous 4- UICCFileView1.updateRecord() 00 00 00, previous 4- UICCFileView1.increase(), 00 00 01 5- UICCFileView1.readRecord(), current 6- UICCFileView1.readRecord(), previous 7- UICCFileView2.select() DFTEST, UICCFileView2.select() EFCAND, UICCFileView2.readRecord(), current 8- UICCFileView2.increase(), 00 00 01 9- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADF1FileView1.select() DFTEST, ADF1FileView1.select() DFTEST, ADF1FileView1.select() DFTEST, ADF1FileView1.select() EFCAND, ADF1FileView1.select() EFCAND, ADF1FileView1.updateRecord() 00 00 00, previous 11- ADF1FileView1.updateRecord() 00 00 00, previous 12- ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 14- resp[] = 00 00 02 10- returns 00 00 01 11- UICCException.RECORD_NOT_F OUND is thrown 12- No exception is thrown 12- No exception is thrown 13- resp[] = 00 00 02 14- returns 00 00 02 14- returns 00 00 02 14- returns 00 00 02		1- Reset		
3- UICCFileView1.select() DFTEST, UICCFileView1.select() EFCAND, UICCFileView1.updateRecord() 00 00 00, previous 4- UICCFileView1.updateRecord() 00 00 00, previous 4- UICCFileView1.increase(), 00 00 01 5- UICCFileView1.readRecord(), current 6- UICCFileView1.readRecord(), previous 7- UICCFileView2.select() DFTEST, UICCFileView2.select() EFCAND, UICCFileView2.readRecord(), current 8- UICCFileView2.increase(), 00 00 01 9- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADF1FileView1.select() DFTEST, ADF1FileView1.select() DFTEST, ADF1FileView1.select() DFTEST, ADF1FileView1.select() EFCAND, ADF1FileView1.select() EFCAND, ADF1FileView1.updateRecord() 00 00 00, previous 11- ADF1FileView1.updateRecord() 00 00 00, previous 12- ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 14- resp[] = 00 00 02 10- returns 00 00 01 11- UICCException.RECORD_NOT_F OUND is thrown 12- No exception is thrown 12- No exception is thrown 13- resp[] = 00 00 02 14- returns 00 00 02 14- returns 00 00 02 14- returns 00 00 02		2 Trigger the applict		
UICCFileView1.updateRecord() 00 00 00, previous UICCFileView1.updateRecord() 00 00 00, previous 4- UICCFileView1.increase(), 00 00 01 5- UICCFileView1.readRecord(), current 6- UICCFileView1.readRecord(), previous 7- UICCFileView2.select() DFTEST, UICCFileView2.readRecord(), current UICCFileView2.readRecord(), current 8- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADFIFileView1.select() DFTEST, ADFIFileView1.select() DFTEST, ADFIFileView1.select() DFTEST, ADFIFileView1.readRecord(), current 12- ADFIFileView1.updateRecord() 00 00 00, previous ADFIFileView1.updateRecord() 00 00 00, previous 13- ADFIFileView1.increase(),00 00 02 14- ADFIFileView1.readRecord(), current 13- resp[] = 00 00 01 11- returns 00 00 01 5- returns 00 00 00 7- UICCException.RECORD_NOT_F OUND is thrown 11- CException.RECORD_NOT_F OUND is thrown 12- No exception is thrown 12- No exception is thrown		2- Iligger the applet		
UICCFileView1.updateRecord() 00 00 00, previous 4- UICCFileView1.increase(), 00 00 01 5- UICCFileView1.readRecord(), current 6- UICCFileView1.readRecord(), previous 7- UICCFileView2.select() DFTEST, UICCFileView2.readRecord(), current 8- UICCFileView2.increase(),00 00 01 9- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADF1FileView1.select() DFTEST, ADF1FileView1.select() EFCARO, ADF1FILEVIEW2.select() EFCARO, ADF1FILEVIEW3.select() EFCARO, ADF1FILEVIEW3			2 No exception is thrown	
previous UICCFileView1.updateRecord() 00 00 00, previous 4- UICCFileView1.increase(), 00 00 01 5- UICCFileView1.readRecord(), current 6- UICCFileView1.readRecord(), previous 7- UICCFileView2.select() DFTEST, UICCFileView2.readRecord(), current UICCFileView2.increase(), 00 00 01 8- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADFIFILEView1.select() DFTEST, ADFIFILEView1.select() DFTEST, ADFIFILEView1.readRecord(), current 12- ADFIFILEView1.readRecord(), current 11- ADFIFILEView1.updateRecord() 00 00 00, previous ADFIFILEView1.updateRecord() 00 00 00, previous 13- ADFIFILEView1.increase(),00 00 02 14- ADFIFILEView1.readRecord(), current 13- resp[] = 00 00 01 5- returns 00 00 01 6- returns 00 00 00 7- UICCException.RECORD_NOT_F OUND is thrown 11- UICCException.RECORD_NOT_F OUND is thrown 12- No exception is thrown 12- No exception is thrown 13- resp[] = 00 00 02 14- returns 00 00 01 15- returns 00 00 01 15- returns 00 00 00 15- returns 00		UICCFileView1.select() EF _{CARU,} UICCFileView1.updateRecord() 00 00 00,	3- No exception is thrown	
previous 4- UICCFileView1.increase(), 00 00 01 5- UICCFileView1.readRecord(), current 6- UICCFileView1.readRecord(), previous 7- UICCFileView2.select() DF _{TEST} , UICCFileView2.select() EF _{CARU} , UICCFileView2.readRecord(), current 8- UICCFileView2.increase(),00 00 01 8- resp[] = 00 00 01 6- returns 00 00 00 7- UICCException.RECORD_NOT_F OUND is thrown 8- resp[] = 00 00 02 9- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADF1FileView1.select() DF _{TEST} , ADF1FileView1.select() EF _{CARU} , DAF1FileView1.readRecord(), current 12- ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 13- resp[] = 00 00 01 15- returns 00 00 01 16- returns 00 00 00 17- UICCException.RECORD_NOT_F OUND is thrown 11- UICCException.RECORD_NOT_F OUND is thrown 12- No exception is thrown 12- No exception is thrown 13- resp[] = 00 00 02 14- resp[] = 00 00 02 14- returns 00 00 02 14- returns 00 00 01 15- returns 00 00 00 16- returns 00 00 00 18- resp[] = 00 00 02 11- returns 00 00 02		previous		
4- UICCFileView1.increase(), 00 00 01 5- UICCFileView1.readRecord(), current 6- UICCFileView2.select() DF _{TEST} , UICCFileView2.select() EF _{CARU} , UICCFileView2.readRecord(), current 8- UICCFileView2.increase(),00 00 01 8- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADF1FileView1.select() DF _{TEST} , ADF1FileView1.select() DF _{TEST} , ADF1FileView1.select() DF _{TEST} , ADF1FileView1.readRecord(), current 12- ADF1FileView1.readRecord(), current 12- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 13- resp[] = 00 00 01 5- returns 00 00 01 6- returns 00 00 00 7- UICCException.RECORD_NOT_F OUND is thrown 11- UICCException.RECORD_NOT_F OUND is thrown 12- No exception is thrown 12- No exception is thrown 13- resp[] = 00 00 02 14- returns 00 00 02 14- returns 00 00 02		-		
5- UICCFileView1.readRecord(), current 6- UICCFileView2.select() DF _{TEST} , UICCFileView2.select() EF _{CARU} , UICCFileView2.readRecord(), current 8- UICCFileView2.increase(),00 00 01 9- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADF1FileView1.select() DF _{TEST} , ADF1FileView1.select() DF _{TEST} , ADF1FileView1.readRecord(), current 12- ADF1FileView1.readRecord(), current 12- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 15- returns 00 00 01 6- returns 00 00 00 7- UICCException.RECORD_NOT_F OUND is thrown 11- UICCException.RECORD_NOT_F OUND is thrown 12- No exception is thrown 12- No exception is thrown 13- resp[] = 00 00 02 14- returns 00 00 01 6- returns 00 00 00 7- UICCException.RECORD_NOT_F OUND is thrown 11- UICCException.RECORD_NOT_F OUND is thrown 12- No exception is thrown 13- resp[] = 00 00 02 14- returns 00 00 01 6- returns 00 00 00 7- UICCException.RECORD_NOT_F OUND is thrown 11- UICCException.RECORD_NOT_F OUND is thrown 11- UICCException.RECORD_NOT_F OUND is thrown 11- VICCException.RECORD_NOT_F OUND is thrown				
6- UICCFileView1.readRecord(), previous 7- UICCFileView2.select() DF _{TEST} , UICCFileView2.select() EF _{CARU} , UICCFileView2.readRecord(), current 8- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADF1FileView1.select() DF _{TEST} , ADF1FileView1.select() DF _{TEST} , ADF1FileView1.readRecord(), current 12- ADF1FileView1.readRecord(), current 12- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 14- resturns 00 00 01 6- returns 00 00 01 6- returns 00 00 01 8- resp[] = 00 00 02 9- returns 00 00 01 11- UICCException.RECORD_NOT_F OUND is thrown 12- No exception is thrown 12- No exception is thrown			4- resp[] = 00 00 01	
7- UICCFileView2.select() DF _{TEST} , UICCFileView2.select() EF _{CARU} , UICCFileView2.readRecord(), current 8- UICCFileView2.increase(),00 00 01 9- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADF1FileView1.select() DF _{TEST} , ADF1FileView1.select() EF _{CARU} , ADF1FileView1.readRecord(), current 12- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 13- resp[] = 00 00 02 13- resp[] = 00 00 02 14- returns 00 00 02 14- returns 00 00 02			5- returns 00 00 01	
UICCFileView2.select() EF _{CARU} , UICCFileView2.readRecord(), current 8- UICCFileView2.increase(),00 00 01 9- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADF1FileView1.select() DF _{TEST} , ADF1FileView1.select() EF _{CARU} , ADF1FileView1.readRecord(), current 12- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current UICCException.RECORD_NOT_F OUND is thrown 11- UICCException.RECORD_NOT_F OUND is thrown 12- No exception is thrown 13- resp[] = 00 00 02 14- returns 00 00 02 14- returns 00 00 02		7 HICCERIOWIOWS cologe () DE		
UICCFileView2.readRecord(), current 8- UICCFileView2.increase(),00 00 01 9- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADF1FileView1.select() DF _{TEST} , ADF1FileView1.select() EF _{CARU} , ADF1FileView1.readRecord(), current 12- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 13- resp[] = 00 00 02 14- returns 00 00 02 14- returns 00 00 02 14- returns 00 00 02				
9- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADF1FileView1.select() DFTEST, ADF1FileView1.select() EFCARU, ADF1FileView1.readRecord(), current 12- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 8- resp[] = 00 00 02 10- returns 00 00 01 11- UICCException.RECORD_NOT_F OUND is thrown 12- No exception is thrown 12- No exception is thrown 13- resp[] = 00 00 02 14- returns 00 00 02 14- returns 00 00 02				
9- UICCFileView2.readRecord(), current 10- UICCFileView2.readRecord(), previous 11- ADF1FileView1.select() DFTEST, ADF1FileView1.select() EFCARU, ADF1FileView1.readRecord(), current 12- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 8- resp[] = 00 00 02 10- returns 00 00 01 11- UICCException.RECORD_NOT_F OUND is thrown 12- No exception is thrown 12- No exception is thrown 13- resp[] = 00 00 02 14- returns 00 00 02 14- returns 00 00 02		8- UICCFileView2.increase().00 00 01		
10- UICCFileView2.readRecord(), previous 11- ADF1FileView1.select() DFTEST, ADF1FileView1.select() EFCARU, ADF1FileView1.readRecord(), current 12- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 10- returns 00 00 01 11- UICCException.RECORD_NOT_F OUND is thrown 12- No exception is thrown 12- No exception is thrown 13- resp[] = 00 00 02 14- returns 00 00 01				
11- ADF1FileView1.select() DFTEST, ADF1FileView1.select() EFCARU, ADF1FileView1.readRecord(), current 12- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 11- UICCException.RECORD_NOT_F OUND is thrown 12- No exception is thrown 13- resp[] = 00 00 02 14- returns 00 00 02 14- returns 00 00 02				
ADF1FileView1.select() EF _{CARU} , ADF1FileView1.readRecord(), current 12- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 13- resp[] = 00 00 02 14- returns 00 00 02		_		
ADF1FileView1.readRecord(), current 12- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 13- resp[] = 00 00 02 14- returns 00 00 02				
12- ADF1FileView1.updateRecord() 00 00 00, previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 13- resp[] = 00 00 02 14- returns 00 00 02			1 · · · · · · · · · · · · · · · · · · ·	
previous ADF1FileView1.updateRecord() 00 00 00, previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 12- No exception is thrown 13- resp[] = 00 00 02 14- returns 00 00 02		12- ADF1FileView1 undateRecord() 00 00 00	COND IS UNOWIT	
previous 13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 13- resp[] = 00 00 02 14- returns 00 00 02		previous	12- No exception is thrown	
13- ADF1FileView1.increase(),00 00 02 14- ADF1FileView1.readRecord(), current 13- resp[] = 00 00 02 14- returns 00 00 02				
14- ADF1FileView1.readRecord(), current 13- TeSp[] = 00 00 02		breatons		
14- ADFIFILEVIEWI. readrecord(), current 14- returns 00 00 02		11.5	13- resp[] = 00 00 02	
		<pre>14- ADF1FileView1.readRecord(), current 15- ADF1FileView1.readRecord(), previous</pre>		

ld	Description	API Expectation	APDU Expectation
	16- ADF1FileView2.select() DF _{TEST}	15- returns 00 00 00	
	ADF1FileView2.select() EF _{CARU} , ADF1FileView2.readRecord(), current	16- UICCException.RECORD_NOT_F OUND is thrown	
	17- ADF1FileView2.increase(),00 00 02	17- resp[] = 00 00 04	
	18- ADF1FileView2.readRecord(), current 19- ADF1FileView2.readRecord(), previous	18- returns 00 00 04 19- returns 00 00 02	
	20- select DF $_{\mbox{\scriptsize TEST}},$ select EF $_{\mbox{\scriptsize CARU}},$ readRecord current	Applet finalizes	20- SW = 6A 83
	21- readRecord previous 22- readRecord previous		21- returns 00 00 01 22- returns 00 00 02
	23- updateRecord previous AA AA AA 24- updateRecord previous 55 55 55		23- SW = 90 00
	25- select AID of ADF1, select DF $_{\mbox{\scriptsize TEST}},$ select EF $_{\mbox{\scriptsize CARU}},$ readRecord current		24- SW = 90 00 25- SW = 6A 83
	26- readRecord previous 27- readRecord previous		26- returns 00 00 02 27- returns 00 00 04
	28- updateRecord previous AA AA AA 29- updateRecord previous 55 55 55		28- SW = 90 00 29- SW = 90 00
8	CreateFile EF		
	1- Reset		
	2- Trigger the applet		
	3- UICCAdminFileView1.select() DF _{TEST} , UICCAdminFileView1.select() 6F 29	3- UICCException.FILE_NOT_FOUN D is thrown	
	4- UICCAdminFileView1.create() 6F 29 5- UICCAdminFileView1.select() 6F 29	4- No exception is thrown 5- No exception is thrown	
	6- UICCAdminFileView2.select() DF _{TEST} , UICCAdminFileView2.select() 6F 29 7- UICCAdminFileView2.select() 6F 2A	6- No exception is thrown 7- UICCException.FILE_NOT_FOUN	
	8- UICCAdminFileView2.create() 6F 2A	D is thrown 8- No exception is thrown	
	9- UICCAdminFileView1.select() 6F 2A 10- UICCAdminFileView1.select() 6F 29	9- No exception is thrown 10- No exception is thrown 11-	
	11- ADF1AdminFileView1.select() DF _{TEST} , ADF1AdminFileView1.select() 6F 29	UICCException.FILE_NOT_FOUN D is thrown	
	12- ADF1AdminFileView1.create() 6F 29 13- ADF1AdminFileView1.select() 6F 29	12- No exception is thrown 13- No exception is thrown	
	14- ADF1AdminFileView2.select() DF _{TEST} , ADF1AdminFileView2.select() 6F 29 15- ADF1AdminFileView2.select() 6F 2A	14- No exception is thrown 15-	
	16- ADF1AdminFileView2.create() 6F 2A	UICCException.FILE_NOT_FOUN D is thrown 16- No exception is thrown	
	17- ADF1AdminFileView1.select() 6F 2A 18- ADF1AdminFileView1.select() 6F 29	17- No exception is thrown 18- No exception is thrown	
	21- select DF _{TEST} , select 6F 29	Applet finalizes	21- SW = 90 00
	22- select 6F 2A		22- SW = 90 00
	23- select AID of ADF1, select DF TEST, select 6F 29		23- SW = 90 00

ld	Description	API Expectation	APDU Expectation
	24- select 6F 2A	7 <u> </u>	7 ii 2 c zapeciunen
			24- SW = 90 00
9	CreateFile DF		24- 377 = 90 00
9	Createrile Dr		
	1- Reset		
	I- Reset		
	2- Trigger the applet		
	2 IIIggor one approv		
	3- UICCAdminFileView1.select() DF _{TEST}	3-	
	UICCAdminFileView1.select() 5F 01	UICCException.FILE_NOT_FOUN	
		D is thrown	
	4- UICCAdminFileView1.create() 5F 01		
	5- UICCAdminFileView1.select() 5F 01	4- No exception is thrown	
	C HICCO duin Bilania and C DB	5- No exception is thrown	
	6- UICCAdminFileView2.select() DF _{TEST} , UICCAdminFileView2.select() 5F 01		
	7- UICCAdminFileView2.select() 5F 01		
	, olderdillifileviewz.select() of 02	6- No exception is thrown	
		7-	
	8- UICCAdminFileView2.create() 5F 02	UICCException.FILE_NOT_FOUN	
		D is thrown	
	9- UICCAdminFileView1.select() 5F 02	8- No exception is thrown	
	10- UICCAdminFileView1.select() 5F 01		
		9- No exception is thrown	
		10- No exception is thrown	
	11-	To the exception is time with	
	ADF1AdminFileView1.select() 5F 01		
	ADITAGMINITEVICWI.SCIECE (/ SI VI	11-	
	12- ADF1AdminFileView1.create() 5F 01	UICCException.FILE_NOT_FOUN	
	13- ADF1AdminFileView1.select() 5F 01	D is thrown	
		D is tillowii	
	14- ADF1AdminFileView2.select() 5F 01	12- No exception is thrown	
	15- ADF1AdminFileView2.select() 5F 02	13- No exception is thrown	
		13- No exception is thrown	
	16- ADF1AdminFileView2.create() 5F 02		
	TO ADPIAGRATE THE VIEW Z. CLEARE () SP 02	14 No expension is thrown	
	17- ADF1AdminFileView1.select() 5F 02	14- No exception is thrown 15-	
	18- ADF1AdminFileView1.select() 5F 01		
		UICCException.FILE_NOT_FOUN	
		D is thrown	
	21- select 5F 01	16- No exception is thrown	
	00	47 11 0 0 0	
	22- select 5F 02	17- No exception is thrown	
	23- select AID of ADF1, select 5F 01	18- No exception is thrown	04 004 00 65
	24- select 5F 02		21- SW = 90 00
		Applet finalizes	
			22- SW = 90 00
			23- SW = 90 00
			24- SW = 90 00

ld	Description	API Expectation	APDU Expectation
10	ResizeFile		
	1- Reset		
	2- Trigger the applet		
	3- UICCAdminFileView1.select() DF _{TEST} ,		
	UICCAdminFileViewl.select() EF _{TDAC} , UICCAdminFileViewl.readBinary(), length 06	3- UICCException.OUT_OF_FILE_BO	
	4- UICCAdminFileView1.resize(),add 3 bytes	UNDARIES is thrown	
	UICCAdminFileView1.readBinary(), length 06		
	5- UICCAdminFileView2.select() DF _{TEST} , UICCAdminFileView2.select() EF _{TDAC} , UICCAdminFileView2.readBinary(), length 06	4- returns 00 00 00 FF FF FF	
	6- UICCAdminFileView1.resize(), remove 2	5- returns 00 00 00 FF FF FF	
	bytes	6- No exception is thrown	
	7- ADF1AdminFileView1.select() DF _{TEST} , ADF1AdminFileView1.select() EF _{LNU} , ADF1AdminFileView1.readRecord(),record 4	7-	
	8- ADF1AdminFileView1.resize(),add 2 records ADF1AdminFileView1.readRecord (),record 4	UICCException.RECORD_NOT_F OUND is thrown	
		8- returns FF FF FF FF	
	9- ADF1AdminFileVie2.select() DF _{TEST} , ADF1AdminFileView2.select() EF _{LNU} ,		
	ADF1AdminFileView2.readRecord (),record 4		
	10- ADF1AdminFileView2.resize(), remove 1 record	9- returns FF FF FF FF	
	11- select DF $_{ ext{TEST}}$, select EF $_{ ext{TDAC}}$, readBinary	10- No exception is thrown	11- R-APDU = 00 00 00 FF
	length 06	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	90 00 or
	12- readBinary length 04		62 82 or 67 00
	13- resize, remove 1 byte		
	14- select AID of ADF1, select DF $_{\mbox{\scriptsize TEST}},$ select EF $_{\mbox{\scriptsize LNU}},$ readRecord record 4		12- returns 00 00 00 FF
	15- readRecord record 3		13- SW = 90 00
	16- resize, remove 1 record		14- SW = 6A 83
			15- returns FF FF FF FF
			16- SW = 90 00
11	Non-shareable files (UICCFileView -		
	UICCFileView)		
	1- Reset		
	2- Trigger the applet		
	3- UICCFileView1.select() DF _{TEST} , UICCFileView1.select() EF _{NOSH}	3- No exception is thrown	
	4- UICCFileView2.select() DF _{TEST} , UICCFileView2.select()EF _{NOSH}	4- UICCException.INTERNAL_ERRO R is thrown or	
	5- UICCFileView1.select() DF _{TEST}	UICCException.FILE_NOT_FOUN D	
	6- UICCFileView2.select()EF _{NOSH}	5- No exception is thrown	
		6- No exception is thrown	

ld	Description	API Expectation	APDU Expectation
12	Non-shareable files (FileView - FileView)		
	1- Reset		
	2- Trigger the applet		
	3- ADF1FileView1.select() DF _{TEST,} ADF1FileView1.select()EF _{NOSH}	3- No exception is thrown	
	4- ADF1FileView2.select() DF _{TEST} , ADF1FileView2.select()EF _{NOSH}	4- UICCException.INTERNAL_ERRO R is thrown or UICCException.FILE_NOT_FOUN	
	5- ADF1FileView1.select() DF _{TEST}	D 5- No exception is thrown	
	6- ADF1FileView2.select()EF _{NOSH}	6- No exception is thrown	
13	Non-shareable files (UICCFileView - MF)	o No exception is thrown	
	1- Trigger the applet		
	2- UICCFileView1.select() DF _{TEST} , UICCFileView1.select()EF _{NOSH}	2- No exception is thrown	
		3- Applet sends a display text	
	4- Select DF _{TEST} , select EF _{NOSH}		4- SW = 69 85
4.4	5- Fetch and terminal response		
14	Non-shareable files (FileView - ADF)		
	1- Trigger the applet		
	2- ADF1FileView1.select() DF _{TEST,} ADF1FileView1.select()EF _{NOSH}	2- No exception is thrown	
		3- Applet sends a display text	
	4- Select AID of ADF1, select $\text{DF}_{\text{TEST},}$ select EF_{NOSH}		4- SW = 69 85
	5- Fetch and terminal response		
15	Non-shareable files (MF - UICCFileView)		
	1- Reset		
	2- Select $\mathrm{DF}_{\mathrm{TEST},}$ select $\mathrm{EF}_{\mathrm{NOSH}}$		
	3- Trigger the applet		2- SW = 90 00
	4- UICCFileView1.select() DF _{TEST,} UICCFileView1.select()EF _{NOSH}	4-	
		UICCException.INTERNAL_ERRO R is thrown or UICCException.FILE_NOT_FOUN D	

ld	Description	API Expectation	APDU Expectation
16	Non-shareable files (ADF - FileView)		
	1- Reset		
	2- Select AID of ADF1, select DF $_{\text{TEST}}$ select EF_{NOSH}		2- SW = 90 00
	3- Trigger the applet		
	4- ADF1FileView1.select() DF _{TEST} , ADF1FileView1.select() EF _{NOSH}	4- UICCException.INTERNAL_ERRO R is thrown or UICCException.FILE_NOT_FOUN D	
17	Terminated EF/DF		
	1- Reset		
	2- Trigger the applet		
	3- UICCAdminFileView1.select() DF _{TEST} , UICCAdminFileView1.select() EF _{TERM} 4- UICCAdminFileView1.select() DF _{TEST} , UICCAdminFileView1.select() DF _{TEST} ,	3- No exception is thrown	
	UICCAdminFileView1.select() DF _{TERM}	4- No exception is thrown	

5.2 Package uicc.toolkit

5.2.1 Interface EditHandler

Tests are done in inheriting interfaces EnvelopeResponseHandler and ProactiveHandler.

5.2.2 Interface EnvelopeHandler

5.2.2.1 Method getItemIdentifier

Test Area Reference: Api_2_Enh_Giid

5.2.2.1.1 Conformance requirement:

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

5.2.2.1.1.1 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.

5.2.2.1.1.2 Parameter errors

No requirements.

5.2.2.1.1.3 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 Comprehension TLV.

5.2.2.1.2 Test area files

Test Source: Test_Api_2_Enh_Giid.java.

Test Applet: Api_2_Enh_Giid_1.java.

Cap File: api_2_enh_giid.cap.

5.2.2.1.3 Test coverage

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

5.2.2.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Send envelope Menu Selection with item identifier TLV and identifier value of 03	Returns 03	
2	Send envelope Menu Selection with two item identifier TLV with first value 02 and second 01	Returns 02	
3	Send envelope Menu Selection with two item identifier TLV with first value 04 and second 01, call twice the method getItemIdentifier()	Returns 04 Returns 04	
4	Send envelope Menu Selection with item identifier TLV and value of 66. FindTLV() with TAG 02. getItemIdentifier() and then getValueByte() with offset 0	getItemIdentifier()=getValueByte()	
5	Send unrecognized envelope without item identifier TLV and getItemIdentifier()	ToolkitException.UNAVAILABLE_E LEMENT	
6	Send Envelope Menu Selection with item identifier TLV (66), send proactive command. Then getItemIdentifier()	Returns 66	
7	Send Unrecognized Envelope with item identifier TLV but without item number	ToolkitException.OUT_OF_TLV_B OUNDARIES	

5.2.2.2 Method getLength

Test Area Reference: Api_2_Enh_Glen.

5.2.2.2.1 Conformance requirement

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

5.2.2.2.1.1 Normal execution

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

5.2.2.2.1.2 Parameter errors

No requirements.

5.2.2.2.1.3 Context errors

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

5.2.2.2.2 Test area files

Specific triggering: Unrecognized envelope:

Test Source: Test_Api_2_Enh_Glen.java.

Test Applet: Api_2_Enh_Glen_1.java.

Cap File: api_2_enh_glen.cap.

5.2.2.2.3 Test coverage

CRR number	Test case number
N1	1, 2, 3, 4
C1	Not testable

5.2.2.2.4 Test procedure

ld	Description	API Expectation	APDU Expectation
	Send an Unrecognized Envelope with BER length of 0x31	Result of getLength() is 0x0031	
	Send an Unrecognized Envelope with BER length of 0x7F	Result of getLength() is 0x007Fh	
	Send an Unrecognized Envelope with BER length of 81 80		
4	Send an Unrecognized Envelope with BER length of 81 FC	Result of getLength() is 0x00FCh	

5.2.2.3 Method copy

Test Area Reference: Api_2_Enh_Copy.

5.2.2.3.1 Conformance requirement

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

5.2.2.3.1.1 Normal execution

- CRRN1: copies the Comprehension TLV list contained in the handler to the destination byte array.
- CRRN2: returns dstOffset + dstLength.

5.2.2.3.1.2 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 Comprehension TLV List, an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException.OUT_OF_TLV_BOUNDARIES.

5.2.2.3.1.3 Context errors

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

5.2.2.3.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Enh_Copy.java.

Test Applet: Api_2_Enh_Copy_1.java.

Cap File: api_2_enh_copy.cap.

5.2.2.3.4 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	Not testable

5.2.2.3.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	NULL as parameter to dstBuffer	NullPointerException is thrown	<u> </u>
2	dstOffset ≥ dstBuffer.length	ArrayIndexOutOfBoundsException is	
	<pre>copy() dstBuffer.length = 5</pre>	thrown	
	dstOffset = 5		
	dstLength = 1		
3	dstOffset < 0	ArrayIndexOutOfBoundsException is	
	copy()	thrown	
	<pre>dstBuffer.length = 5 dstOffset = -1</pre>		
	dstLength = 1		
4	dstLength > dstBuffer.length	ArrayIndexOutOfBoundsException is	
	copy()	thrown	
	<pre>dstBuffer.length = 5 dstOffset = 0</pre>		
	dstLength = 6		
5	DstOffset + dstLength > dstBuffer.length	ArrayIndexOutOfBoundsException is	
	copy()	thrown	
	DstBuffer.length = 5 DstOffset = 3		
	DstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsException is	
	copy()	thrown	
	dstBuffer.length = 5		
	<pre>dstOffset = 0 dstLength = -1</pre>		
7	DstLength > length of the Comprehension TLV	ToolkitException OUT OF TLV BO	
	list	UNDARIES is thrown	
	copy()		
	DstBuffer.length = 48		
	DstOffset = 0 DstLength = 48		
8	Successful call, dstBuffer is the whole buffer	Result of copy() is 0X0047	
	copy()		
	DstBuffer.length = 47		
	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	
	copy()		
	DstBuffer.length = 50 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 0X00FF	
	copy()		
	<pre>dstBuffer.length = 252 dstOffset = 3</pre>		
	dstLength = 252		
13	Compare the whole buffer	Result of arrayCompare() is 0	
	Successful call, dstBuffer is part of a buffer	Result of copy() is 0X0104	
	copy()		
	<pre>dstBuffer.length = 260 dstOffset = 257</pre>		
	dstLength = 3		
15	Compare the whole buffer	Result of arrayCompare() is 0	

ld	Description	API Expectation	APDU Expectation
16	Successful call, copy() with length =0	Result of copy() is 0x104	
	dstBuffer.length = 260		
	dstOffset = 260		
	dstLength = 0		

5.2.2.4 Method findTLV

Test Area Reference: Api_2_Enh_Find.

5.2.2.4.1 Conformance requirement

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

5.2.2.4.1.1 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.

5.2.2.4.1.2 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.

5.2.2.4.1.3 Context errors

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

5.2.2.4.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Enh_Find.java.

Test Applet: Api_2_Enh_Find_1.java.

Cap File: api_2_enh_find.cap.

5.2.2.4.3 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	Not testable

5.2.2.4.4 Test procedure

ld	Description	API Expectation	APDU Expectation
	Trigger the applet with Unrecognized Envelope	·	-
	including:		
	Tag 82, tag 86, tag 8B, tag 02 and tag 04		
1	Invalid input parameter	ToolkitException.BAD_INPUT_PA	
	findTLV()	RAMETER is thrown	
	Occurrence = 0		
2	Search 1st TLV	Result is TLV_FOUND_CR_SET	
	findTLV()		
	Tag = 02h		
3	Occurrence = 1 Call the getValueLength() method	Result is 0x02	
4	Search 2nd TLV	Result is 0x02 Result is TLV_FOUND_CR_SET	
4	findTLV()	Result is TEV_FOUND_CR_SET	
	Tag = 06h		
	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	
	findTLV()		
	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	
	findTLV()		
	Tag = 02h		
9	Occurrence = 3 Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
9	Can the getvalueLength() method	ELEMENT is thrown.	
10	Search the TLV	Result is	
10	findTLV()	TLV FOUND CR NOT SET	
	Tag = 02h	TEV_FOUND_CK_NOT_SET	
	Occurrence = 2		
11	Search the TLV	Result is	
	findTLV()	TLV_FOUND_CR_NOT_SET	
	Tag = 04h		
40	Occurrence = 1	Describing TLV FOLIND OF OFT	
12	Search tag 86h	Result is TLV_FOUND_CR_SET	
	<pre>findTLV() Tag = 86h</pre>		
	Occurrence = 1		
13	Search tag 84h	Result is	
•	findTLV()	TLV_FOUND_CR_NOT_SET	
	Tag = 84h		
	Occurrence = 1		

5.2.2.5 Method getValueLength

Test Area Reference: Api_2_Enh_Gvle.

5.2.2.5.1 Conformance requirement

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

5.2.2.5.1.1 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.

5.2.2.5.1.2 Parameter errors

No requirements.

5.2.2.5.1.3 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.

5.2.2.5.2 Test area files

Specific triggering: Unrecognized Envelope:

Test source: Test_Api_2_Enh_Gvle.java.

Test Applet: Api_2_Enh_Gvle_1.java.

Cap File: api_2_enh_gvle.cap.

5.2.2.5.3 Test coverage

CRR number	Test case number
N1	2, 3, 4
C1	Not testable
C2	1

5.2.2.5.4 Test procedure

ld	Description	API Expectation	APDU Expectation
	Fill the Unrecognized envelope with TLV: Tag 02,		
	length 02, Tag 06, length 05, Tag 0B, length 24,		
	Tag 33, Length C8		
1	getValueLength()	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown	
2	Search TLV 02h	Result is 0X0002	
	getValueLength()		
3	Search TLV 0Bh	Result is 0X0024	
	getValueLength()		
4	Search TLV 33h	Result is 0X00C8	
	getValueLength()		

5.2.2.6 Method getValueByte

Test Area Reference: Api_2_Enh_Gvby.

5.2.2.6.1 Conformance requirement

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

5.2.2.6.1.1 Normal execution

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

5.2.2.6.1.2 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.

5.2.2.6.1.3 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.

5.2.2.6.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Enh_Gvby.java.

Test Applet: Api_2_Enh_Gvby_1.java.

Cap File: api_2_enh_gvby.cap.

5.2.2.6.3 Test coverage

CRR number	Test case number
N1	3, 4, 5, 6, 7, 8
P1	2
C1	Not testable
C2	1

5.2.2.6.4 Test procedure

ld	Description	API Expectation	APDU Expectation
	Fill the Unrecognized envelope with TLV: Tag 02,		
	length 02, value 83 81, Tag 06, length 06, Tag 0B,		
	length 21, 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)	

ld	Description	API Expectation	APDU Expectation
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	

5.2.2.7 Method copyValue

Test Area Reference: Api_2_Enh_Cpyv.

5.2.2.7.1 Conformance requirement

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

5.2.2.7.1.1 Normal execution

- CRRN1: copies a part of the last TLV element which has been found, into a destination. buffer.
- CRRN2: returns dstOffset + dstLength.

5.2.2.7.1.2 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.

5.2.2.7.1.3 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.

5.2.2.7.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Enh_Cpyv.java.

Test Applet: Api_2_Enh_Cpyv_1.java.

Cap File: api_2_enh_cpyv.cap.

5.2.2.7.3 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	Not testable
C2	11

5.2.2.7.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Search TLV 02h	-	
	copyValue() with a null dstBuffer	NullPointerException is thrown	
2	Search TLV 0Bh	·	
	<pre>dstOffset ≥ dstBuffer.length copyValue() dstBuffer.length = 5 dstOffset = 5 dstLength = 1</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
3	<pre>dstOffset < 0 copyValue() dstBuffer.length = 5 dstOffset = -1 dstLength = 1</pre>	ArrayIndexOutOfBoundsException is thrown	
4	<pre>dstLength >dstBuffer.length copyValue() dstBuffer.length = 5 dstOffset = 0 dstLength = 6</pre>	ArrayIndexOutOfBoundsException is thrown	
5	<pre>dstOffset + dstLength >dstBuffer.length copyValue() dstBuffer.length = 5 dstOffset = 3 dstLength = 3</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
6	<pre>dstLength < 0 copyValue() dstBuffer.length = 5 dstOffset = 0 dstLength = -1</pre>	ArrayIndexOutOfBoundsException is thrown	
7	Search TLV 06h		
	<pre>valueOffset ≥ TLV Length copyValue() valueOffset = 6 dstBuffer.length = 15 dstOffset = 0 dstLength = 1</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
8	<pre>valueOffset < 0 copyValue() valueOffset = -1 dstBuffer.length = 15 dstOffset = 0 dstLength = 1</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
9	<pre>dstLength > TLV length copyValue() valueOffset = 0 dstBuffer.length = 15 dstOffset = 0 dstLength = 7</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
10	<pre>valueOffset + dstLength > TLV length copyValue() valueOffset = 2 dstBuffer.length = 15 dstOffset = 0 dstLength = 5</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	

ld	Description	API Expectation	APDU Expectation
11	Search TLV 01h		
	copyValue()	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown on the	
		copyValue() method call.	
12	Search TLV 06h		
	Successful call	Result of copyValue() is 0x0006	
	copyValue()		
	valueOffset = 0		
	dstBuffer.length = 6		
	dstOffset = 0		
40	dstLength = 6	B 4: 001	
13	Compare buffer	Result is 00h	
	buffer = 81 11 22 33 44 F5		
14	initialize dstBuffer		
	dstBuffer = 55 55 55	5 11 1 11 11 11 11 11 11	
	Successful call	Result of copyValue() is 0x0007	
	copyValue()		
	valueOffset = 1		
	<pre>dstBuffer.length = 20 dstOffset = 3</pre>		
	dstLength = 4		
15	Compare buffer	Result is 00h	
'	buffer =	Troduit 10 0011	
	55 55 55 11 22		
	33 44 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		

5.2.2.8 Method compareValue

Test Area Reference: Api_2_Enh_Cprv.

5.2.2.8.1 Conformance requirement

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

5.2.2.8.1.1 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 Comprehension TLV List is less than that in compareBuffer.
- CRRN3: returns 1 if the first miscomparing byte in Comprehension TLV List is greater than that in compareBuffer.

5.2.2.8.1.2 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.

5.2.2.8.1.3 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.

5.2.2.8.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Enh_Cprv.java.

Test Applet: Api_2_Enh_Cprv_1.java.

Cap File: api_2_enh_cprv.cap.

5.2.2.8.3 Test coverage

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

5.2.2.8.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Search TLV 02h	·	•
	compareValue() with a null compareBuffer	NullPointerException is thrown	
2	Search TLV 0Bh		
	compareOffset ≥ compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	compareValue()	n is thrown	
	<pre>compareBuffer.length = 5</pre>		
	compareOffset = 5		
	compareLength = 1		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
	compareValue()	n is thrown	
	<pre>compareBuffer.length = 5</pre>		
	compareOffset = -1		
	compareLength = 1		
4	compareLength >compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	compareValue()	n is thrown	
	compareBuffer.length = 5		
	compareOffset = 0		
	compareLength = 6		

ld	Description	API Expectation	APDU Expectation
5	compareOffset + compareLength	ArrayIndexOutOfBoundsExceptio	•
	>compareBuffer.length	n is thrown	
	<pre>compareValue() compareBuffer.length = 5</pre>		
	compareOffset = 3		
	compareLength = 3		
6	compareLength < 0	ArrayIndexOutOfBoundsExceptio	
	compareValue()	n is thrown	
	<pre>compareBuffer.length = 5 compareOffset = 0</pre>		
	compareLength = -1		
7	Search TLV 06h		
	valueOffset ≥ TLV Length	ToolkitException.OUT_OF_TLV_	
	compareValue()	BOUNDARIES is thrown	
	<pre>valueOffset = 6 compareBuffer.length = 15</pre>		
	compareOffset = 0		
	compareLength = 1		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	<pre>compareValue() valueOffset = -1</pre>	BOUNDARIES is thrown	
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 1	Tablish Evens the COLT OF TOX	
9	compareLength > TLV length compareValue()	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
	<pre>valueOffset = 0</pre>	DOUNDAKIES IS IULOMU	
	compareBuffer.length = 15		
	compareOffset = 0		
10	compareLength = 7 valueOffset + compareLength > TLV length	ToolkitException.OUT_OF_TLV_	
10	compareValue()	BOUNDARIES is thrown	
	valueOffset = 2	BOONDAINEO IS UIIOWII	
	compareBuffer.length = 15		
	<pre>compareOffset = 0 compareLength = 5</pre>		
11	Search TLV 01h	Result is TLV_NOT_FOUND	
	compareValue()	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown	
12	Search TLV 06h		
	Initialize compareBuffer		
	compareBuffer = 81 11 22 33 44 F5		
	Compare buffers	Result is 00h	
	compareValue()	Troodic to con	
	valueOffset = 0		
	<pre>compareOffset = 0 compareLength = 6</pre>		
13	Initialize compareBuffer		
	compareBuffer =		
	7F 11 22 33 44 F5		
1.4	Compare buffers with same parameters	Result is -1	
14	Initialize compareBuffer compareBuffer =		
	83 11 22 33 44 F5		
	Compare buffers with same parameters	Result is -1	
15	Initialize compareBuffer		
	compareBuffer = 55 55 55 81 11 22 33 44 F5		
	55 55 55 81 11 22 33 44 F5 55 55 55 55 55		
	Compare buffers	Result is 00h	
	compareValue()		
	valueOffset = 1		
	<pre>compareOffset = 4 compareLength = 5</pre>		
16	Initialize compareBuffer		
1	compareBuffer =		
1	55 55 55 81 10 23 33 44 F5		
	55 55 55 55 55 Compare buffers with same parameters	Result is +1	
	Sompare buners with same parameters	INGOUIL IO T I	

ld	Description	API Expectation	APDU Expectation
17	Initialize compareBuffer		
	compareBuffer =		
	55 55 55 81 12 21 33 44 F5		
	55 55 55 55		
	Compare buffers with same parameters	Result is -1	
18	Successful call, compareValue() with length=0 CompareBuffer.length = 15 CompareOffset = 15 CompareLength = 0	Result of compareValue() is 0	

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

Test Area Reference: Api_2_Enh_Facyb_Bs.

5.2.2.9.1 Conformance requirement

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

5.2.2.9.1.1 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.

5.2.2.9.1.2 Parameter errors

- CRRP1: if dstBuffer is null NullPointerException shall be thrown.
- CRRP2: if dstOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

5.2.2.9.1.3 Context errors

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

5.2.2.9.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Enh_Facyb_Bs.java.

Test Applet: Api_2_Enh_Facyb_Bs_1.java.

Cap File: api_2_enh_facyb_bs.cap.

5.2.2.9.3 Test coverage

CRR number	Test case number
N1	9, 11, 13
N2	6, 7
N3	8, 10, 12
N4	14, 15, 16, 17
P1	1
P2	2, 3, 4, 5
C1	Not testable

5.2.2.9.4 Test procedure

ld	Description	API Expectation	APDU Expectation
	Fill the Unrecognized Envelope with TLV: Tag		
	02, Value 83 81, Tag 06, Value 81 11 22 33 44		
	F5, 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	
	findAndCopyValue()	n is thrown	
	tag = 06h dstBuffer.length = 06		
	dstOffset = 06		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
ľ	findAndCopyValue()	n is thrown	
	dstBuffer.length = 06		
	dstOffset = -1		
4	length > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>findAndCopyValue() dstBuffer.length = 05</pre>	n is thrown	
	dstBuller.length = 05 dstOffset = 0		
5	DstOffset + length >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	DstBuffer.length = 06		
	DstOffset = 1		
6	Select a TLV (tag 02h)		
	findAndCopyValue()	ToolkitException.UNAVAILABLE_	
	tag = 03h	ELEMENT is thrown	
7	Call the getValueLength() method	ToolkitException.UNAVAILABLE_ ELEMENT is thrown.	
8	Successful call	Result of findAndCopyValue () is	
	<pre>findAndCopyValue() Tag = 06h</pre>	0006	
	DstBuffer.length = 06		
	DstOffset = 0		
9	Compare buffer	Result is 00h	
	buffer = 81 11 22 33 44 F5		
10	Initialize dstBuffer		
	dstBuffer = 55 55 55		
	Successful call	Result of findAndCopyValue () is	
	<pre>findAndCopyValue() dstBuffer.length = 12</pre>	0008	
	dstBuffer.length = 12 dstOffset = 2		
11	Compare buffer	Result is 00h	
	buffer =		
	55 55 81 11 22 33 44 F5 55 55 55 55		
12	Successful call	Result of findAndCopyValue () is	
	<pre>findAndCopyValue() tag = 02h</pre>	0002	
	dstBuffer.length = 2		
	dstOffset = 0		
13	Compare buffer	Result is 00h	
	buffer = 83 81		

ld	Description	API Expectation	APDU Expectation
14	Successful call (with tag 82h)	Result of findAndCopyValue () is	
	findAndCopyValue()	0002	
	tag = 82h		
	dstBuffer.length = 02		
	dstOffset = 0		
15	Compare buffer	Result is 00h	
	buffer = 83 81		
16	Successful call (with tag B3h)	Result of findAndCopyValue () is	
	findAndCopyValue()	00C4	
	tag = B3h		
	dstBuffer.length = C4		
	dstOffset = 0		
17	Compare buffer	Result is 00h	
	buffer = 01 02 C4		

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

Test Area Reference: Api_2_Enh_Facybs_Bss.

5.2.2.10.1 Conformance requirement

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

5.2.2.10.1.1 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.

5.2.2.10.1.2 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.
- 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.

5.2.2.10.1.3 Context errors

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

5.2.2.10.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Enh_Facybs_Bss.java.

Test Applet: Api_2_Enh_Facybs_Bss_1.java.

Cap File: api_2_enh_facybs_bss.cap.

5.2.2.10.3 Test coverage

CRR number	Test case number
N1	14, 15, 17, 19, 20
N2	11, 12
N3	13, 15, 17, 19, 25
N4	21, 22, 23, 24
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
P4	26
C1	Not testable

5.2.2.10.4 Test procedure

ld	Description	API Expectation	APDU Expectation
	Fill the Unrecognized Envelope with TLV: Tag 02, Value 83 81, Tag 06, Value 81 11 22 33 44 F5, Tag 02 Value 22 44 Tag 33, Length C4 Value 01 02		
1	findAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	<pre>dstOffset ≥ dstBuffer.length findAndCopyValue() tag = 06h, occurrence = 1 valueOffset = 0 dstBuffer.length = 5 dstOffset = 5 dstLength = 1</pre>	ArrayIndexOutOfBoundsException is thrown	
3	<pre>dstOffset < 0 findAndCopyValue() dstBuffer.length = 5 dstOffset = -1 dstLength = 1</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
4	<pre>dstLength >dstBuffer.length findAndCopyValue() dstBuffer.length = 5 dstOffset = 0 dstLength = 6</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
5	<pre>dstOffset + dstLength >dstBuffer.length findAndCopyValue() dstBuffer.length = 5 dstOffset = 3 dstLength = 3</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
6	<pre>dstLength < 0 findAndCopyValue() dstBuffer.length = 5 dstOffset = 0 dstLength = -1</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
7	<pre>valueOffset ≥ Value Length findAndCopyValue() tag = 06h, occurrence = 1 valueOffset = 6 dstBuffer.length = 15 dstOffset = 0 dstLength = 1</pre>	ToolkitException.OUT_OF_TLV_BOUNDARIES is thrown	

ld	Description	API Expectation	APDU Expectation
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	Al DO Expodiction
	findAndCopyValue()	BOUNDARIES is thrown	
	valueOffset = -1	BOOMB/ II NIEO IO II II OWII	
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 1	Tablista Cut OF TIV	
9	dstLength > Value length findAndCopyValue()	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
	valueOffset = 0	BOUNDARIES IS UITOWIT	
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 7		
10	valueOffset + dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
	<pre>findAndCopyValue() valueOffset = 2</pre>	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 5		
11	Select a TLV (tag 02h)		
	findAndCopyValue()	ToolkitException.UNAVAILABLE_	
	tag = 06h	ELEMENT is thrown	
12	occurrence = 2 Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
12	San the getvalueLength() method	ELEMENT is thrown.	
13	Successful call	Result of findAndCopyValue() is 6	
10	findAndCopyValue()	() is o	
	tag = 06h, occurrence = 1		
	<pre>valueOffset = 0</pre>		
	dstBuffer.length = 06		
	<pre>dstOffset = 0 dstLength = 06</pre>		
14	Compare buffer	Result is 00h	
	buffer = 81 11 22 33 44 F5	Troodic to con	
15	Initialize dstBuffer		
	dstBuffer = 55 55 55		
	Successful call	Result of findAndCopyValue () is	
	findAndCopyValue()	0007	
	<pre>tag = 06h, occurrence = 1 valueOffset = 2</pre>		
	dstBuffer.length = 12		
	dstOffset = 3		
	dstLength = 04		
16	Compare buffer	Result is 00h	
	buffer = 55 55 55 22 33 44 F5 55 55 55 55 55		
17	Successful call	Result of findAndCopyValue() is	
''	findAndCopyValue()	0002	
	tag = 02h, occurrence = 1		
	valueOffset = 0		
	<pre>dstBuffer.length = 12 dstOffset = 0</pre>		
	dstLength = 2		
18	Compare buffer	Result is 00h	
	buffer = 83 81 55 55		
19	Successful call	Result of findAndCopyValue() is	
	findAndCopyValue()	0002	
	<pre>tag = 02h, occurrence = 2 valueOffset = 0</pre>		
	dstBuffer.length = 12		
	dstOffset = 0		
	dstLength = 2		
20	Compare buffer	Result is 00h	
24	buffer = 22 44 55 55	Docult of find And Cons Malus (Alice	
21	Successful call (with tag 82h) findAndCopyValue()	Result of findAndCopyValue () is 0002	
	tag = 82h	0002	
	occurrence = 1		
	valueOffset = 0		
	dstBuffer.length = 12		
	<pre>dstOffset = 0 dstLength = 02</pre>		
22	Compare buffer	Result is 00h	
	buffer = 83 81 55 55	1334113 3371	
_			

ld	Description	API Expectation	APDU Expectation
23	Successful call (with tag 82h)	Result of findAndCopyValue () is	
	findAndCopyValue()	0002	
	tag = 82h		
	occurrence = 2		
	<pre>valueOffset = 0</pre>		
	dstBuffer.length = 12		
	dstOffset = 0		
	dstLength = 02		
24	Compare buffer	Result is 00h	
	Buffer = 22 44 55 55		
25	Successful call, findAndCopyValue() with	Result of findAndCopyValue () is	
	length =0	12	
	DstBuffer.length = 12		
	dstOffset = 12		
	dstLength = 0		
26	Invalid parameter	ToolkitException.BAD_INPUT_PA	
	findAndCopyValue()	RAMETER is thrown	
	occurrence = 0		

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

Test Area Reference: Api_2_Enh_Facrb_Bs.

5.2.2.11.1 Conformance requirement

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

5.2.2.11.1.1 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 Comprehension TLV is less than that in compareBuffer returns -1.
- CRRN5: if the first miscomparing byte in Comprehension TLV is greater than that in compareBuffer returns 1.
- CRRN6: The search method is comprehension required flag independent.

5.2.2.11.1.2 Parameter errors

- CRRP1: if compareBuffer is null NullPointerException shall be thrown.
- CRRP2: if compareOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

5.2.2.11.1.3 Context errors

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

5.2.2.11.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Enh_Facrb_Bs.java.

Test Applet: Api_2_Enh_Facrb_Bs_1.java.

Cap File: api_2_enh_facrb_bs.cap.

5.2.2.11.3 Test coverage

CRR number	Test case number
N1	6,7
N2	9
N3	8, 12, 13
N4	11, 15
N5	10, 14
N6	16, 17
P1	1
P2	2, 3, 4, 5
C1	Not testable

5.2.2.11.4 Test procedure

ld	Description	API Expectation	APDU Expectation
	Fill the Unrecognized Envelope with TLV: Tag	7.11 2.1.000.000.000	7 11 2 0 2 Aproximon
	02, Value 83 81, Tag 06, Value 81 11 22 33 44		
	F5, Tag 02 Value 22 44 Tag 33, Length C4		
1	Value 01 02 findAndCompareValue() with a null dstBuffer	Null Dointor Evantion in thrown	
2	· · ·	NullPointerException is thrown ArrayIndexOutOfBoundsExceptio	
2	compareOffset ≥ compareBuffer.length findAndCompareValue()	In is thrown	
	tag = 06h	ii is unown	
	compareBuffer.length = 12		
	compareOffset = 12		
3	<pre>compareOffset < 0 findAndCompareValue()</pre>	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length = 12	n is thrown	
	compareOffset = -1		
4	length > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	<pre>compareBuffer.length = 05 compareOffset = 0</pre>		
5	compareOffset + length >	ArrayIndexOutOfBoundsExceptio	
	compareBuffer.length	n is thrown	
	findAndCompareValue()		
	<pre>compareBuffer.length = 12 compareOffset = 7</pre>		
6	Select a TLV (tag 02h)		
	findAndCompareValue()	ToolkitException.UNAVAILABLE_	
	tag = 03h	ELEMENT is thrown	
7	Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown.	
8	Initialize compareBuffer		
	compareBuffer = 81 11 22 33 44 F5	Result is 00h	
	Compare buffers findAndCompareValue()	Result is oun	
	tag = 06h		
	compareOffset = 0		
9	Verify current TLV	Result is 06	
40	getValueLength()		
10	Initialize compareBuffer compareBuffer = 81 11 22 33 44 F4		
	Compare buffers with same parameters	Result is +1	
	Outipale bullets with same parameters	I VOSUIL IS T I	

ld	Description	API Expectation	APDU Expectation
11	Initialize compareBuffer	·	·
	compareBuffer = 81 11 22 33 44 F6		
	Compare buffers with same parameters	Result is -1	
12	Initialize compareBuffer		
	compareBuffer =		
	55 55 81 11 22 33 44 F5 55 55 55 55		
	Compare buffers	Result is 00h	
	findAndCompareValue()		
	compareOffset = 2		
13	Initialize compareBuffer		
	compareBuffer =		
	55 55 83 81 55 55 55 55 55 55 55		
	Compare buffers	Result is 00h	
	findAndCompareValue()		
	compareOffset = 2		
14	Initialize compareBuffer		
	compareBuffer =		
	55 55 83 80 55 55 55 55 55 55 55	DIt i 4	
	Compare buffers	Result is +1	
	<pre>findAndCompareValue() compareOffset = 2</pre>		
15	Initialize compareBuffer		
13	compareBuffer =		
	55 55 83 82 55 55 55 55 55 55 55		
	Compare buffers	Result is -1	
	findAndCompareValue()	Trocall to	
	compareOffset = 2		
16	Initialize compareBuffer		
	compareBuffer =		
	83 81 55 55 55 55 55 55 55 55 55		
	Successful call (with tag 02h)	Result is 00h	
	findAndCompareValue()		
	tag = 02h		
	compareBuffer.length = 12		
47	compareOffset = 0		
17	Initialize compareBuffer		
	CompareBuffer = 01 02 C4	Decult is 00h	
	Successful call (with tag B3h)	Result is 00h	
	<pre>findAndCompareValue() Tag = B3h</pre>		
	CompareBuffer.length = C4		
	CompareOffset = 0		
	Comparcorract - 0		

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

Test Area Reference: Api_2_Enh_Facrbbs_Bss.

5.2.2.12.1 Conformance requirement

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

5.2.2.12.1.1 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 Comprehension TLV is less than that in compareBuffer -1 is returned.
- CRRN5: if the first miscomparing byte in Comprehension TLV is greater than that in compareBuffer 1 is returned
- CRRN6: The search method is comprehension required flag independent.

5.2.2.12.1.2 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.

5.2.2.12.1.3 Context errors

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

5.2.2.12.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Enh_Facrbbs_Bss.java.

Test Applet: Api_2_Enh_Facrbbs_Bss_1.java.

Cap File: api_2_enh_facrbbs_bss.cap.

5.2.2.12.3 Test coverage

CRR number	Test case number
N1	12, 13
N2	15
N3	14, 18, 21, 22, 26
N4	17, 19, 23
N5	16, 20
N6	24, 25
P1	1
P2	2, 3, 4, 5, 6
P3	7, 8, 9, 10
P4	11
C1	Not testable

5.2.2.12.4 Test procedure

ld	Description	API Expectation	APDU Expectation
	Fill the Unrecognized Envelope with TLV: Tag	•	•
	02, Value 83 81, Tag 06, Value 81 11 22 33 44		
	F5, Tag 02 Value 22 44 Tag 33, Length C4		
	Value 01 02		
1	findAndCompareValue() with a null	NullPointerException is thrown	
'	compareBuffer	Indiir ointerexception is thrown	
2		A manufactor of Other and Even anti-	
-	compareOffset ≥ compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	<pre>tag = 06h, occurrence = 1 valueOffset = 0</pre>		
	compareBuffer.length = 6		
	compareOffset = 6		
	compareLength = 1		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	compareBuffer.length = 6		
	compareOffset = -1		
	compareLength = 1		
4	compareLength >compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	compareBuffer.length = 5		
	compareOffset = 0		
	compareLength = 6		
5	compareOffset + compareLength	ArrayIndexOutOfBoundsExceptio	
	>compareBuffer.length	n is thrown	
	findAndCompareValue()		
	<pre>compareBuffer.length = 5 compareOffset = 3</pre>		
	compareLength = 3		
6	compareLength < 0	ArrayIndexOutOfBoundsExceptio	
"	findAndCompareValue()	n is thrown	
	compareBuffer.length = 5	IT IS UTIOWIT	
	compareOffset = 0		
	compareLength = -1		
7	valueOffset ≥ Value Length	ToolkitException.OUT_OF_TLV_	
	findAndCompareValue()	BOUNDARIES is thrown	
	tag = 06h, occurrence = 1		
	valueOffset = 6		
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 1		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	findAndCompareValue()	BOUNDARIES is thrown	
	valueOffset = -1		
	<pre>compareBuffer.length = 15 compareOffset = 0</pre>		
	compareLength = 1		
9	compareLength > Value length	ToolkitException.OUT_OF_TLV_	
~	findAndCompareValue()	BOUNDARIES is thrown	
	valueOffset = 0		
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 7		
10	valueOffset + compareLength > Value length	ToolkitException.OUT_OF_TLV_	
	findAndCompareValue()	BOUNDARIES is thrown	
	<pre>valueOffset = 2 compareBuffer.length = 15</pre>		
	compareBuffer.length = 15 compareOffset = 0		
	compareLength = 5		
11	Invalid parameter	ToolkitException.BAD_INPUT_PA	
' '	findAndCompareValue()	RAMETER is thrown	
	occurrence = 0	TO AVIETER IS UTIOWIT	
12	Select a TLV (tag 02h)		
	findAndCompareValue()	ToolkitException.UNAVAILABLE_	
	tag = 06h	ELEMENT is thrown	
	occurrence = 2		
13	Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown.	

ld	Description	API Expectation	APDU Expectation
14	Initialize compareBuffer	711 Exposition	74 DO Expositation
'-	compareBuffer = 81 11 22 33 44 F5		
	findAndCompareValue()	Result is 00h	
	tag = 06h, occurrence = 1	Trocuit is con	
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 6		
15	Verify current TLV	Result is 0006	
	getValueLength()		
16	Initialize compareBuffer		
	compareBuffer = 81 11 22 33 44 F4		
	Compare buffers with same parameters	Result is +1	
17	Initialize compareBuffer		
	compareBuffer = 81 11 22 33 44 F6		
	Compare buffers with same parameters	Result is -1	
18	Initialize compareBuffer		
	compareBuffer =		
	55 55 55 22 33 44 F5 55 55 55 55	DIt i- 00k	
	Compare buffers	Result is 00h	
	<pre>findAndCompareValue() valueOffset = 2</pre>		
	compareOffset = 3		
	compareLength = 4		
19	Initialize compareBuffer		
	compareBuffer =		
	55 55 55 22 33 45 F5 55 55 55 55		
	Compare buffers with same parameters	Result is -1	
20	Initialize compareBuffer		
	compareBuffer =		
	55 55 55 22 33 43 F5 55 55 55 55		
	Compare buffers with same parameters	Result is +1	
21	Initialize compareBuffer		
	compareBuffer =		
	83 81 55 55 55 55 55 55 55 55 55		
	findAndCompareValue()	Result is 00h	
	<pre>tag = 02h, occurrence = 1 valueOffset = 0</pre>		
	compareOffset = 0		
	compareLength = 2		
22	Initialize compareBuffer		
	compareBuffer =		
	22 44 55 55 55 55 55 55 55 55 55		
	findAndCompareValue()	Result is 00h	
	tag = 02h, occurrence = 2		
	valueOffset = 0		
	<pre>compareOffset = 0 compareLength = 2</pre>		
23	Initialize compareBuffer		
23	compareBuffer =		
	22 45 55 55 55 55 55 55 55 55 55		
	findAndCompareValue()	Result is -1	
	tag = 02h, occurrence = 2		
	valueOffset = 0		
	compareOffset = 0		
0.1	compareLength = 2		
24	Initialize compareBuffer		
	compareBuffer = 83 81 55 55 55 55 55 55		
	Successful call (with tag 02h)	Result is 00h	
	findAndCompareValue()	IZESUIL IS UUII	
	tag = 02h, occurrence = 1		
	valueOffset = 0		
	compareBuffer.length = 12		
	compareOffset = 0		
	compareLength = 2		

ld	Description	API Expectation	APDU Expectation
25	Initialize compareBuffer		
	compareBuffer = 01 02 C4		
	Successful call (with tag B3h)	Result is 00h	
	findAndCompareValue()		
	tag = B3h, occurrence = 1		
	<pre>valueOffset = 0</pre>		
	compareBuffer.length = 00C4		
	compareOffset = 0		
<u> </u>	compareLength = 00C4		
26	Successful call, findAndCompareValue() with	Result of findAndCompareValue()	
	length =0	is 00h	
	DstBuffer.length = C4		
	DstOffset = C4		
	DstLength = 0		

5.2.2.13 Method getCapacity

Test Area Reference: Api_2_Enh_Gcap.

5.2.2.13.1 Conformance requirement

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

public byte getCapacity()

5.2.2.13.1.1 Normal execution

• CRRN1: The method shall return the maximum size of the Comprehension TLV list managed by the handler.

5.2.2.13.1.2 Parameter errors

No requirements

5.2.2.13.1.3 Context errors

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

5.2.2.13.2 Test area files

Test Source: Test_Api_2_Enh_Gcap.java.

Test Applet: Api_2_Enh_Gcap_1.java.

Cap File: api_2_enh_gcap.cap.

5.2.2.13.3 Test coverage

CRR number	Test case number
N1	1
C1	Not testable

5.2.2.13.4 Test procedure

I	Description	API Expectation	APDU Expectation
_	EnvelopeHandler available		
	<pre>1 - Send envelope Menu Selection 2 - The applet calls the getLength() method 3 - The applet calls the getCapacity() method</pre>	1 - Applet is triggered 2 - No exception is thrown 3 - No exception is thrown; the capacity is greater than the BER TLV Length	

5.2.2.14 Method getChannelldentifier

Test Area Reference: Api_2_Enh_Gcid.

5.2.2.14.1 Conformance requirement

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

5.2.2.14.1.1 Normal execution

- CRRN1: The method shall return the channel identifier byte value.
- CRRN2: The channel identifier byte value returned shall be from the first Channel status TLV element.
- CRRN3: If the element is available it becomes the currently selected TLV.
- CRRN4: The channel identifier is available for all triggered toolkit applets from the invocation to the termination of their processToolkit method if the EnvelopeHandler is available.

5.2.2.14.1.2 Parameter errors

No requirements

5.2.2.14.1.3 Context errors

- CRRC1: The method shall throw ToolkitException.UNAVAILABLE_ELEMENT if the Channel status TLV is not present.
- CRRC2: The method shall throw ToolkitException.OUT_OF_TLV_BOUNDARIES if the Comprehension TLV Channel Status length is equal to 0.

5.2.2.14.2 Test area files

Test Source: Test_Api_2_Enh_Gcid.java.

Test Applet: Api_2_Enh_Gcid_1.java.

Cap File: api_2_enh_gcid.cap.

5.2.2.14.3 Test coverage

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

5.2.2.14.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	1- Applet1 is installed with maximum number of		2- OPEN CHANNEL
	<pre>channel = 07. 2- Applet1 builds proactive commands OPEN CHANNEL</pre>		proactive command is
	with init() method in order to open all channels.		fetched
	ProactiveHandler.send() method is called.		TERMINAL RESPONSE is
			issued with Channel Id
			from 01 to 07
1	Successful Call		
	1- Send envelope Event Download Channel Status		
	with channel status TLV:	1- Applet1 is triggered	
	channel status value = 0x8100.		
	2 Call EnvoloneHandler getChannelIdentifier()	2- Returns 0x01	
	2- Call EnvelopeHandler.getChannelIdentifier() method		
2	Two channel status elements		
	1 Cond onvolone Event Develond Channel Chat-		
	1- Send envelope Event Download Channel Status with two channel status TLV:		
	first value = 0x8400		
	second value = 0x8500.		
	2- Call twice the		
	EnvelopeHandler.getChannelIdentifier() method	2- Returns twice 0x04	
3	Verify current TLV		
	1- Send envelope Event Download Channel Status		
	with channel status TLV:		
	Channel Status value = 0x0605		
	ViewHandler.FindTLV() with Device IdentityTag.		
	2- Call EnvelopeHandler.getChannelIdentifier()		
	method.	2- Returns 0x06	
	3- Compare EnvelopeHandler.getChannelIdentifier()	3- GetChannelldentifier()	
	and then ViewHandler.getValueByte(0).	=getValueByte(0)	
4	UNAVAILABLE_ELEMENT exception	3-110.00-310(0)	
	1 Cond and a Many Col 11 Col 2		
	1- Send envelope Menu Selection without Channel Status TLV.		
		2- A Toolkit	
	2- Call EnvelopeHandler.getChannelIdentifier()	exception.UNAVAILABLE	
	method.	_ELEMENT is thrown.	
5	Successful Call		
	1- Send Envelope Event Download Channel Status	1- Returns 0x06	
	with Channel Status TLV:	1- Kelums uxuo	
	Channel status value = 0x0600		
	2- Call EnvelopeHandler.getChannelIdentifier()		
	method.		

ld	Description	API Expectation	APDU Expectation
6	OUT_OF_TLV_BOUNDARIES exception	2- A Toolkit	
		exception.OUT_OF_TLV_ BOUNDARIES is thrown.	
	2- Call EnvelopeHandler.getChannelIdentifier() method.		

5.2.2.15 Method getChannelStatus

Test Area Reference: Api_2_Enh_Gcst.

5.2.2.15.1 Conformance requirement

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

5.2.2.15.1.1 Normal execution

- CRRN1: The method shall return the value of the first Channel Status TLV element.
- CRRN2: The Channel Status value returned shall be from the element whose channel identifier is equal to the ChannelIdentifier parameter.
- CRRN3: If the element is available it becomes the currently selected TLV.
- CRRN4: The channel status is available for all triggered toolkit applets from the invocation to the termination
 of their processToolkit method if the EnvelopeHandler is available.

5.2.2.15.1.2 Parameter errors

No requirements.

5.2.2.15.1.3 Context errors

- CRRC1: The method shall throw ToolkitException.UNAVAILABLE_ELEMENT if no Channel Status TLV element with the right identifier could be found.
- CRRC2: The method shall throw ToolkitException.OUT_OF_TLV_BOUNDARIES if a Channel Status TLV element with the right identifier could be found but its value is less than 2 bytes long.

5.2.2.15.2 Test area files

Test Source: Test_Api_2_Enh_Gcst.java.

Test Applet: Api_2_Enh_Gcst_1.java.

Cap File: api_2_enh_gcst.cap.

5.2.2.15.3 Test coverage

CRR number	Test case number
N1	6
N2	5
N3	7
N4	8
C1	1, 2
C2	3, 4

5.2.2.15.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	1- Applet1 is installed with maximum	·	2- OPEN CHANNEL
	number of channel = 01.		proactive command is
	2- Applet1 builds proactive commands OPEN CHANNEL with init() method in order to		fetched
	open a channel.		
	ProactiveHandler.send() method is called.		TERMINAL RESPONSE is
			issued with channel status
			value = 0x8100
1	Channel status TLV is not present		
	1- Send envelope Event Download Channel		
	Status with no Channel status TLV		
	2- Call		
	EnvelopeHandler.getChannelStatus(0x01) method.	2- UNAVAILABLE_ELEMENT	
	method.	ToolkitException is thrown	
2	Channel status TLV with the identifier is not		
	present		
	1- Send envelope Event Download Channel Status with Channel status Value = 0x8200		
	Status with channel status value = 0x6200		
	2- Call	O LINIAN/AU ABLE ELEMENT	
	EnvelopeHandler.getChannelStatus(0x01)	2- UNAVAILABLE_ELEMENT	
	method.	ToolkitException is thrown	
3	Channel status TLV with a length equal to 0		
	1- Send envelope Event Download Channel		
	Status with Channel status length equal		
	to 0.	2- UNVAILABLE_ELEMENT	
	2- Call	ToolkitException is thrown	
	EnvelopeHandler.getChannelStatus(0x01)	·	
	method.		
4	Channel status TLV with a length equal to 1		
	1 Cand american Front Doubled Channel		
	1- Send envelope Event Download Channel Status with Channel status length equal		
	to 1.	2 OUT OF THE DOUBLES	
		2- OUT_OF_TLV_BOUNDARIES ToolkitException is thrown	
	2- Call	ToolkitException is thrown	
	EnvelopeHandler.getChannelStatus(0x01) method.		
5	Get channel status value		
1			
	1- Send envelope Event Download Channel Status with Channel status value=0x8100.		
	Scatus with Chammer status value=0x8100.		
	2- Call		
	EnvelopeHandler.getChannelStatus(0x01)	2- Returns 0x8100	
	method.	2- Meturiis uxo ruu	
6	Get channel status value with 2 TLV		
	1- Send envelope Event Download Channel		
	Status with 2 channel status value: 0x8100 and 0x8101.		
	OXOTOO AMA OXOTOT.		
1	2- Call		
	EnvelopeHandler.getChannelStatus(0x01)	2- Returns 0x8100	
	method.		

ld	Description	API Expectation	APDU Expectation
7	Channel status TLV is currently selected TLV	-	_
	1- Send envelope Event Download Channel Status with channel status value 0x8100. Call ViewHandler.FindTLV() method with Device Identity Tag.		
	2- Call EnvelopeHandler.getChannelStatus(0x01) method.	2- Returns 0x8100	
	3- Compare EnvelopeHandler.getChannelStatus(0x01) and ViewHandler.getValueShort(0) method results.	3- Check getChannelStatus() =getValueShort(0)	
8	Get channel status value after a proactive		
	command		
	1- Send envelope Event Download Channel Status with Channel status value=0x8100.		
	2- Call EnvelopeHandler.getChannelStatus(0x01) method.	2- Returns 0x8100	
	3- Send a proactive command display text		
	4- Call EnvelopeHandler.getChannelStatus(0x01)	4- Returns 0x8100	3- DISPLAY TEXT proactive command is fetched
	method.		TERMINAL RESPONSE is issued

5.2.2.16 Method getValueShort

Test Area Reference: Api_2_Enh_Gvsh.

5.2.2.16.1 Conformance requirement

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

 $\label{eq:public_short} \mbox{public short getValueShort(short valueOffset)} \\ \mbox{throws ToolkitException}$

5.2.2.16.1.1 Normal execution

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

5.2.2.16.1.2 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.

5.2.2.16.1.3 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.

5.2.2.16.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Enh_Gvsh.java.

Test Applet: Api_2_Enh_Gvsh_1.java.

Cap File: api_2_enh_gvsh.cap.

5.2.2.16.3 Test coverage

CRR number	Test case number
N1	3, 4, 5, 6, 7, 8
P1	2
C1	Not testable
C2	1

5.2.2.16.4 Test procedure

ld	Description	API Expectation	APDU Expectation
	Fill the Unrecognized envelope with TLVs:		
	Tag 02, Length 02 Value 83 81		
	Tag 06, Length 06 Value 81 11 22 33 44 F5		
	Tag 33, Length C9 Value 01 02		
1	getValueShort(0)	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown	
2	Search TLV 02h		
	getValueShort(2)	ToolkitException.OUT_OF_TLV_	
		BOUNDARIES is thrown	
3	Search TLV 02h		
	getValueShort(0)	Result is 0x83 0x81	
4	Search TLV 06h		
	getValueShort(1)	Result is 0x11 0x22	
5	Search TLV 33h		
	getValueShort(7E)	Result is 0x7F 0x80	
6	Search TLV 33h		
	getValueShort(80)	Result is 0x81 0x82	
7	getValueShort(7F)	Result is 0x80 0x81	
8	Search TLV B3h		
	getValueShort(C7)	Result is 0xC8 0xC9	

5.2.2.17 Method getSize

Test Area Reference: Api_2_Enh_Gtsz.

5.2.2.17.1 Conformance requirement

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

public short getSize()

5.2.2.17.1.1 Normal execution

• CRRN1: Returns the BER TLV size, this includes the tag and the length.

5.2.2.17.1.2 Parameter errors

No requirements.

5.2.2.17.1.3 Context errors

No requirements.

5.2.2.17.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Enh_Gtsz.java.

Test Applet: Api_2_Enh_Gtsz_1.java.

Cap File: api_2_enh_gtsz.cap.

5.2.2.17.3 Test coverage

CRR number	Test case number
1	1, 2

5.2.2.17.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Send an unrecognized envelope of length		
	0x33 (including tag and length)		
1	Call getSize() method just after	Returns 0x33	
	triggering of the application.		
2	Call getSize() method after a proactive	Returns 0x33	
	command.		

5.2.2.18 Method getTag

Test Area Reference: Api_2_Enh_Gttg.

5.2.2.18.1 Conformance requirement

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

public short getTag()

5.2.2.18.1.1 Normal execution

• CRRN1: Returns the BER Tag of the BER TLV list.

5.2.2.18.1.2 Parameter errors

No requirements.

5.2.2.18.1.3 Context errors

No requirements.

5.2.2.18.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Enh_Gttg.java.

Test Applet: Api_2_Enh_Gttg_1.java.

Cap File: api_2_enh_gttg.cap.

5.2.2.18.3 Test coverage

CRR number	Test case number
1	1. 2

5.2.2.18.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Send an unrecognized envelope		
	Call getTag() method just after triggering of the application.	Returns 0xXX	
2	Call getTag() method after a proactive command.	Returns 0xXX	

5.2.3 Interface EnvelopeResponseHandler

5.2.3.1 Method post

Test Area Reference: Api_2_Erh_Post.

5.2.3.1.1 Conformance requirement

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

5.2.3.1.1.1 Normal execution

- CRRN1: The toolkit applet can continue its processing after the call to post() method.
- CRRN2: In case of CALL_CONTROL, the CAT Runtime Environment has to set the boolean value always to true.
- CRRN3: The CAT Runtime Environment shall send the response before the emission of the next proactive command or when all the Toolkit Applets triggered by the event have finished their processing.
- CRRN4: The CAT Runtime Environment has to map the boolean value to the correct status word. If the value is true it corresponds to a successful ending of the command status word "9000". If the value is false it corresponds to a warning status word "6200".

5.2.3.1.1.2 Parameter errors

No requirements.

5.2.3.1.1.3 Context errors

- CRRC1: The method shall throw ToolkitException.HANDLER_NOT_AVAILABLE if the handler is busy.
- CRRC2: The method shall throw ToolkitException.BAD_LENGTH if the resulting response length is greater than 256 and the response data has to be retrieved by the GET RESPONSE command.

5.2.3.1.2 Test area files

Specific triggering: Unrecognized envelope:

Test Source: Test_Api_2_Erh_Post.java.

Test Applet: Api_2_Erh_Post_1.java.

Cap File: api_2_erh_post.cap.

5.2.3.1.3 Test coverage

CRR numl	ber	Test case number	
N1		3, 4, 7	
N2		8, 9	
N3		4, 5	
N4		1, 2, 4, 7	
C1		3, 6, 7	
C2		10 (see note)	
NOTE: 7	This t	est is conditional and automatically performed if the capacity of the	
(envel	opeResponseHandler is greater than 256 bytes.	

5.2.3.1.4 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		FD data with status word 90 00 are
	bytes in it) and then post() data with		returned
3	value TRUE Verify that after a post the handler is no	ToolkitException.HANDLER_	
3	more available	NOT_AVAILABLE is thrown	
	appendTLV(), then post() and then	on the second appendTLV	
	appendTLV()	on the second appendict	
4	construct the response (appendTLV() with		
	0x10 data) and post it with value FALSE and		
	then send a display text		
	1- Send an unrecognizedEnvelope() to		1- 12 data with status SW = 62 00
	trigger the applet. 2- Send a		
	envelopeEventDownloadUserActivity() to		2- SW = 91 15 is returned and display
	get the 91 XX status word.		text is retrieved by a FETCH
5	Verify that it is possible to send a proactive		
	command after a post()		
	<pre>getTheHandler() and post(), then send a</pre>		
	display text 1- Send an unrecognizedEnvelope() to		4 004 00 00
	trigger the applet.		1- SW = 62 00
	2- Send a		O CVV O1 15 is not more done display
	envelopeEventDownloadUserActivity() to		2- SW = 91 15 is returned and display text is retrieved by a FETCH
6	get the 91 XX status word.	Tablitty continu HANDLED	text is retileved by a FETCIT
6	Verify it is not possible to post after a proactive command	ToolkitException.HANDLER_ NOT_AVAILABLE is thrown	
	getTheHandler(), appendTLV(), send a	NOT_AVAILABLE IS UITOWIT	
	display text and then post().		
7	Verify that the handler is no more available	ToolkitException.HANDLER_	12 data with status word 62 00 are
	after a post()	NOT_AVAILABLE is thrown	returned
	getTheHandler(), appendTLV(), then		
	<pre>post() with value FALSE and then post() with value TRUE</pre>		
8	CALL_CONTROL, the CAT Runtime		
	Environment set the boolean value always		12 data with status word 90 00 are
	to true		returned
	Trigger the applet with CALL CONTROL		
	<pre>getTheHandler(), appendTLV(), post() with value FALSE</pre>		
9	CALL_CONTROL, the CAT Runtime		
	Environment set the boolean value always		
	to true		12 data with status word 90 00 are
			returned
	Trigger the applet with CALL CONTROL		
	<pre>getTheHandler(), appendTLV(), post() with value TRUE</pre>		
10	Resulting response length greater than 256	iavacard framework APDI IEv	
10		ception.BAD_LENGTH is	
	getTheHandler(), appendTLV()(data	thrown	
	length 252 bytes), appendTLV()(data		
1	length 1 byte), post() with value TRUE		

5.2.3.2 Method postAsBERTLV

Test Area Reference: Api_2_Erh_Poab.

5.2.3.2.1 Conformance requirement

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

5.2.3.2.1.1 Normal execution

- CRRN1: The toolkit applet can continue its processing after the call to postAsBERTLV() method.
- CRRN2: In case of CALL_CONTROL, the CAT Runtime Environment has to set the boolean value always to
 true.
- CRRN3: The CAT Runtime Environment shall send the response before the emission of the next proactive command or when all the Toolkit Applets triggered by the event have finished their processing.
- CRRN4: The byte tag is the BER Tag at the beginning of the Comprehension TLV list.
- CRRN5: The CAT Runtime Environment has to map the Boolean value to the correct status word. If the value is true it corresponds to a successful ending of the command status word "9000". If the value is false it corresponds to a warning status word "6200".

5.2.3.2.1.2 Parameter errors

No requirements.

5.2.3.2.1.3 Context errors

- CRRC1: The method shall thrown ToolkitException.HANDLER_NOT_AVAILABLE if the handler is busy.
- CRRC2: The method shall throw ToolkitException.BAD_LENGTH if the resulting response length is greater than 256 and the response data has to be retrieved by the GET RESPONSE command.

5.2.3.2.2 Test area files

Specific triggering: Unrecognized envelope:

Test Source: Test_Api_2_Erh_Poab.java.

Test Applet: Api_2_Erh_Poab_1.java.

Cap File: api_2_erh_poab.cap.

5.2.3.2.3 Test coverage

CRR number	Test case number
N1	3, 4, 7
N2	8, 9
N3	4, 5
N4	2, 4, 7
N5	1, 2, 4, 7
C1	3, 6, 7
C2	10

5.2.3.2.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	getTheHandler() and then postAsBERTLV()		02 data with status word 90
	(the handler is empty)		00 are returned, the tag shall
			be 33 and the length is 00
2	Fill the handler and then postAsBERTLV()		FF data with status word 90
	the data with value TRUE, and tag 33		00 are returned, the tag shall
			be 33
3	appendTLV(), postAsBERTLV() and then	ToolkitException.HANDLER_NOT_AV	
	appendTLV()	AILABLE is thrown on the second	
		appendTLV	
4	construct the response (appendTLV() with		
	0x10 data) and postAsBERTLV() with value		
	FALSE, tag 75 and then send a display text		1 14 data with atatus CM
	1- Send an unrecognizedEnvelope() to		1- 14 data with status SW = 62 00
	trigger the applet.		02 00
	2- Send a		2- SW = 91 15 is returned
	envelopeEventDownloadUserActivity() to		and display text is retrieved
	get the 91 XX status word.		by a FETCH
5	getTheHandler() and postAsBERTLV() with		by 4 1 2 1 0 1 1
	value FALSE, then send a display text		
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	1- Send an unrecognizedEnvelope() to		1- 02 data are returned with
	trigger the applet.		status SW = 62 00
	2- Send a envelopeEventDownloadUserActivity() to		
	get the 91 XX status word.		2- SW = 91 15 is returned
	goo one of an seasas wera.		and display text is retrieved
			by a FETCH
6	Verify it is not possible to postAsBERTLV()	ToolkitException.HANDLER_NOT_AV	
	after a proactive command	AILABLE is thrown on the	
	<pre>getTheHandler(), appendTLV(), send a</pre>	postAsBERTLV	
	display text and then postAsBERTLV().		
7	Verify that the handler is no more available	ToolkitException.HANDLER_NOT_AV	14 data with status word 62
	after a postAsBERTLV()	AILABLE is thrown on the second	00 are returned, the tag shall
		postAsBERTLV	be 56
	<pre>getTheHandler(), appendTLV()(with data</pre>	•	
	<pre>length = 0x10, then postAsBERTLV() with</pre>		
	value FALSE, tag 56 and then postAsBERTLV() with value TRUE, tag 28		
8	CALL_CONTROL, the CAT Runtime		
"	Environment set the boolean value always		
	to true		12 data with status word 90
			00 are returned
	Trigger the applet with CALL CONTROL		
	getTheHandler(), appendTLV(),		
9	postAsBERTLV() with value FALSE CALL_CONTROL, the CAT Runtime		
۱۶	Environment set the boolean value always		
	to true		12 data with status word 90
	to true		00 are returned
	Trigger the applet with CALL CONTROL		
	<pre>getTheHandler(), appendTLV(),</pre>		
40	postAsBERTLV() with value TRUE	in a send for many and ABBUE	
10	Resulting response length greater than 256		
	getTheHandler(), appendArray()(255	BAD_LENGTH is thrown	
	bytes), postAsBERTLV() with value TRUE		

5.2.3.3 Method getLength

Test Area Reference: Api_2_Erh_Glen.

5.2.3.3.1 Conformance requirement

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

5.2.3.3.1.1 Normal execution

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

5.2.3.3.1.2 Parameter errors

No requirements.

5.2.3.3.1.3 Context errors

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

5.2.3.3.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Glen.java.

Test Applet: Api_2_Erh_Glen_1.java.

Cap File: api_2_erh_glen.cap.

5.2.3.3.3 Test coverage

CRR number	Test case number
N1	1, 2, 3, 4, 5
C1	6

5.2.3.3.4 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	Result of getLength() is	
	Length of getCapacity()-3	getCapacity()-3	
	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()		
6	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then getLength()	_AVAILABLE is thrown	

5.2.3.4 Method copy

Test Area Reference: Api_2_Erh_Copy.

5.2.3.4.1 Conformance requirement

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

5.2.3.4.1.1 Normal execution

- CRRN1: copies the Comprehension TLV list contained in the handler to the destination byte array.
- CRRN2: returns dstOffset + dstLength.

5.2.3.4.1.2 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 Comprehension TLV List, an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException.OUT_OF_TLV_BOUNDARIES.

5.2.3.4.1.3 Context errors

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

5.2.3.4.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Copy.java.

Test Applet: Api_2_Erh_Copy_1.java.

Cap File: api_2_erh_copy.cap.

5.2.3.4.3 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	15

5.2.3.4.4 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	
	copy()	n is thrown	
	<pre>dstBuffer.length = 5 dstOffset = 5</pre>		
	dstLength = 1		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	copy()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = -1		
1	dstLength = 1 dstLength > dstBuffer.length	ArrayladayOutOfPauadaEyaantia	
4	copy ()	ArrayIndexOutOfBoundsException is thrown	
	dstBuffer.length = 5	IT IS UTIOWIT	
	dstOffset = 0		
	dstLength = 6		
5	dstOffset + dstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	copy()	n is thrown	
	<pre>dstBuffer.length = 5 dstOffset = 3</pre>		
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	copy()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = 0		
7	dstLength = -1 dstLength > length of the Comprehension TLV	TablistEvention OUT OF TIV	
'	list	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
	copy()	BOONDAKIES IS UIIOWII	
	dstBuffer.length = 10		
	dstOffset = 0		
	dstLength = 10	D 1: 1 0: 0	
8		Result of copy() is 9	
	<pre>copy() dstBuffer.length = 9</pre>		
	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 0x8F	
	copy()		
	<pre>dstBuffer.length = 0x8F dstOffset = 3</pre>		
	dstLength = 0x8C		
11	Compare the whole buffer	Result of arrayCompare() is 0	
12	Successful call, dstBuffer is part of a buffer	Result of copy() is 9	
	copy()		
	dstBuffer.length = 15		
	<pre>dstOffset = 3 dstLength = 6</pre>		
13	Compare the whole buffer	Result of arrayCompare() is 0	
14	Successful call, copy with length =0	Result of copy() is 15	
'-	copy ()	Trocalt of copy() is 10	
	dstBuffer.length = 15		
	dstOffset = 15		
	dstLength = 0		
15	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then copy()	_AVAILABLE is thrown	

5.2.3.5 Method findTLV

Test Area Reference: Api_2_Erh_Find.

5.2.3.5.1 Conformance requirement

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

5.2.3.5.1.1 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.

5.2.3.5.1.2 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.

5.2.3.5.1.3 Context errors

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

5.2.3.5.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Find.java.

Test Applet: Api_2_Erh_Find_1.java.

Cap File: api_2_erh_find.cap.

5.2.3.5.3 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	14

5.2.3.5.4 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_PA	
	findTLV()	RAMETER is thrown	
	Occurrence = 0		
2			
	Search 1st TLV	Result is TLV_FOUND_CR_SET	
	findTLV()		
	Tag = 01h		
3	Occurrence = 1 Call the getValueLength() method	Result is 03h	
4	Search 2nd TLV	Result is TLV_FOUND_CR_SET	
4	findTLV()	Result is TEV_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	
	findTLV()		
	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	
	findTLV()		
	Tag = 01h Occurrence = 2		
9	Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
9	Can the getvalueLength() method	ELEMENT is thrown.	
10	Append a TLV with tag=02h	ELLIVILINI IS UIIOWII.	
10	Search the TLV	Result is	
	findTLV()	TLV_FOUND_CR_NOT_SET	
	Tag = 02h	TLV_FOUND_CR_NOT_SET	
	Occurrence = 2		
11	Append a TLV with tag=04h		
	Search the TLV	Result is	
	findTLV()	TLV_FOUND_CR_NOT_SET	
	Tag = 04h		
40	Occurrence = 1	D 4: TIV FOUR OR COT	
12	Search tag 81h	Result is TLV_FOUND_CR_SET	
	findTLV() Tag = 81h		
	Occurrence = 1		
13	Search tag 84h	Result is	
'	findTLV()	TLV_FOUND_CR_NOT_SET	
	Tag = 84h	121_100115_011_101_011	
	Occurrence = 1		
14	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then findTLV()	_AVAILABLE is thrown	

5.2.3.6 Method getValueLength

Test Area Reference: Api_2_Erh_Gvle.

5.2.3.6.1 Conformance requirement

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

5.2.3.6.1.1 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.

5.2.3.6.1.2 Parameter errors

No requirements.

5.2.3.6.1.3 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.

5.2.3.6.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Gvle.java.

Test Applet: Api_2_Erh_Gvle_1.java.

Cap File: api_2_erh_gvle.cap.

5.2.3.6.3 Test coverage

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

5.2.3.6.4 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 appendTLV() with TAG 0D and length 0x7F		
	Search TLV 0Dh		
	getValueLength()	Result is 7Fh	
5	Clear the handler and appendTLV() with TAG 0D and length 0x80		
	Search TLV 0Dh		
	getValueLength()	Result is 80h	

ld	Description	API Expectation	APDU Expectation
6	Clear the handler and appendTLV() with TAG		
	0D and length 0xF1		
	Search TLV 0Dh		
	getValueLength()	Result is F1h	
7	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then getValueLength()	_AVAILABLE is thrown	

5.2.3.7 Method getValueByte

Test Area Reference: Api_2_Erh_Gvby.

5.2.3.7.1 Conformance requirement

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

5.2.3.7.1.1 Normal execution

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

5.2.3.7.1.2 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.

5.2.3.7.1.3 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.

5.2.3.7.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Gvby.java.

Test Applet: Api_2_Erh_Gvby_1.java.

Cap File: api_2_erh_gvby.cap.

5.2.3.7.3 Test coverage

CRR number	Test case number
N1	3, 4, 5, 6, 7, 8
P1	2
C1	9
C2	1

5.2.3.7.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	appendTLV() 82 02 81 82, appendTLV() 81 03		
	11 22 FE		
	findTLV with TAG 03		
	getValueByte(0)	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	
	TIVO 14 TAGOD I		
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	
9	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then getValueByte()	_AVAILABLE is thrown	

5.2.3.8 Method copyValue

Test Area Reference: Api_2_Erh_Cpyv.

5.2.3.8.1 Conformance requirement

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

5.2.3.8.1.1 Normal execution

- CRRN1: copies a part of the last TLV element which has been found, into a destination. buffer.
- CRRN2: returns dstOffset + dstLength.

5.2.3.8.1.2 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.

5.2.3.8.1.3 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.

5.2.3.8.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Cpyv.java.

Test Applet: Api_2_Erh_Cpyv_1.java.

Cap File: api_2_erh_cpyv.cap.

5.2.3.8.3 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	17
C2	11

5.2.3.8.4 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	ArrayIndexOutOfBoundsExceptio	
	copyValue()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = 5		
	dstLength = 1		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	copyValue()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = -1		
	dstLength = 1		
4	dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	copyValue()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = 0		
	dstLength = 6		
5	dstLength = 6 dstOffset + dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
5	<pre>dstLength = 6 dstOffset + dstLength >dstBuffer.length copyValue()</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
5	<pre>dstLength = 6 dstOffset + dstLength >dstBuffer.length copyValue() dstBuffer.length = 5</pre>		
5	<pre>dstLength = 6 dstOffset + dstLength >dstBuffer.length copyValue() dstBuffer.length = 5 dstOffset = 3</pre>		
	<pre>dstLength = 6 dstOffset + dstLength >dstBuffer.length copyValue() dstBuffer.length = 5 dstOffset = 3 dstLength = 3</pre>	n is thrown	
5	<pre>dstLength = 6 dstOffset + dstLength >dstBuffer.length copyValue() dstBuffer.length = 5 dstOffset = 3 dstLength = 3 dstLength < 0</pre>	n is thrown ArrayIndexOutOfBoundsExceptio	
	<pre>dstLength = 6 dstOffset + dstLength >dstBuffer.length copyValue() dstBuffer.length = 5 dstOffset = 3 dstLength = 3 dstLength < 0 copyValue()</pre>	n is thrown	
	<pre>dstLength = 6 dstOffset + dstLength >dstBuffer.length copyValue() dstBuffer.length = 5 dstOffset = 3 dstLength = 3 dstLength < 0 copyValue() dstBuffer.length = 5</pre>	n is thrown ArrayIndexOutOfBoundsExceptio	
	<pre>dstLength = 6 dstOffset + dstLength >dstBuffer.length copyValue() dstBuffer.length = 5 dstOffset = 3 dstLength = 3 dstLength < 0 copyValue() dstBuffer.length = 5 dstOffset = 0</pre>	n is thrown ArrayIndexOutOfBoundsExceptio	
	<pre>dstLength = 6 dstOffset + dstLength >dstBuffer.length copyValue() dstBuffer.length = 5 dstOffset = 3 dstLength = 3 dstLength < 0 copyValue() dstBuffer.length = 5</pre>	n is thrown ArrayIndexOutOfBoundsExceptio	

ld	Description	API Expectation	APDU Expectation
7	clear the handler, appendTLV() with TAG: 0D	·	•
	and length 6		
	Select Text String TLV		
	valueOffset ≥ Text String Length	ToolkitException.OUT_OF_TLV_	
	<pre>copyValue() valueOffset = 6</pre>	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	dstOffset = 0		
8	dstLength = 1 valueOffset < 0	Tablist Cycentian OLIT OF TLV	
0	copyValue()	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
	valueOffset = -1	BOONDAINES IS UNOWIT	
	dstBuffer.length = 15		
	<pre>dstOffset = 0 dstLength = 1</pre>		
9	dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
	copyValue()	BOUNDARIES is thrown	
	<pre>valueOffset = 0 dstBuffer.length = 15</pre>		
	dstOffset = 0		
<u> </u>	dstLength = 7		
10	valueOffset + dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
	<pre>copyValue() valueOffset = 2</pre>	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	dstOffset = 0		
11	dstLength = 5 Initialize 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	Described as an Alabas () is 47	
	Successful call copyValue()	Result of copyValue() is 17	
	valueOffset = 0		
	dstBuffer.length = 17		
	<pre>dstOffset = 0 dstLength = 17</pre>		
13	Compare buffer	Result is 00h	
	buffer = 04 00 01 0F		
1.4	Initialize dstBuffer		
14	dstBuffer = 55 55 55		
	clear the handler		
	AppendTLV with TAG 0x0D and value 0x01 0x02 0x83		
	Successful call	Result of copyValue() is 0x84	
	copyValue()		
	<pre>valueOffset = 2 dstBuffer.length = 0x86</pre>		
	dstOffset = 3		
	dstLength = 0x81		
15	Compare buffer	Result is 00h	
	Duffer =		
	03 04 05 06 07		
	08 09 81 55 55 55 55 55		
16	Successful call, copyValue() with length =0	Result of copyValue() is 20	
.0	dstBuffer.length = 20	1.15531. 51. 5557 (31.05() 10.25	
	dstOffset = 20		
17	dstLength = 0 HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
17	Call post() method, then copyValue()	_AVAILABLE is thrown	
	100 post() motiou, then dopy value()		

5.2.3.9 Method compareValue

Test Area Reference: Api_2_Erh_Cprv.

5.2.3.9.1 Conformance requirement

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

5.2.3.9.1.1 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 Comprehension TLV List is less than that in compareBuffer.
- CRRN3: returns 1 if the first miscomparing byte in Comprehension TLV List is greater than that in compareBuffer.

5.2.3.9.1.2 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.

5.2.3.9.1.3 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.

5.2.3.9.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Cprv.java.

Test Applet: Api_2_Erh_Cprv_1.java.

Cap File: api_2_erh_cprv.cap.

5.2.3.9.3 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	19
C2	11

5.2.3.9.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	appendTLV() with TAG: 0D and length 16	•	•
-	Select Text String TLV		
	compareValue() with a null compareBuffer	NullPointerException is thrown	
2		Train cinter Exception to another	
_	compareOffset ≥ compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	compareValue()	n is thrown	
	compareBuffer.length = 5	II lo unown	
	compareOffset = 5		
	compareLength = 1		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
	compareValue()	n is thrown	
	compareBuffer.length = 5		
	compareOffset = -1		
	compareLength = 1		
4	compareLength >compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	compareValue()	n is thrown	
	<pre>compareBuffer.length = 5 compareOffset = 0</pre>		
	compareUniset = 0 compareLength = 6		
5	compareOffset + compareLength	ArrayIndexOutOfBoundsExceptio	
٦	>compareBuffer.length	n is thrown	
	compareValue()	II IS UIIOWII	
	compareBuffer.length = 5		
	compareOffset = 3		
	compareLength = 3		
6	compareLength < 0	ArrayIndexOutOfBoundsExceptio	
	compareValue()	n is thrown	
	compareBuffer.length = 5		
	compareOffset = 0		
	compareLength = -1		
7	appendTLV() with TAG: 0D and length 6		
	Select Text String TLV		
	valueOffset ≥ Text String Length	ToolkitException.OUT_OF_TLV_	
	compareValue()	BOUNDARIES is thrown	
	valueOffset = 6		
	<pre>compareBuffer.length = 15 compareOffset = 0</pre>		
	compareLength = 1		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	compareValue()	BOUNDARIES is thrown	
	valueOffset = -1	DOGNE MILEO IS UNOWIT	
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 1		
9	compareLength > Text String length	ToolkitException.OUT_OF_TLV_	
	compareValue()	BOUNDARIES is thrown	
	valueOffset = 0		
	<pre>compareBuffer.length = 15 compareOffset = 0</pre>		
	compareUniset = 0 compareLength = 7		
	compareneilden - /		

ld	Description	API Expectation	APDU Expectation
10	valueOffset + compareLength > Text String	ToolkitException.OUT_OF_TLV_	Al DO Expediation
10	length	BOUNDARIES is thrown	
	compareValue()	BOONDANIES IS UITOWIT	
	valueOffset = 2		
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 5		
11	Initialize the handler		
	compareValue()	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown	
12	appendTLV with TAG: 0D and value: 04 00 01		
	0F		
	Select Text String TLV		
	Initialize compareBuffer		
	compareBuffer =		
	04 00 01 0F	Result is 00h	
	Compare buffers compareValue()	Result is oon	
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 17		
13	Initialize 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	
14	Initialize compareBuffer	Troodicio i	
' '	compareBuffer =		
	03 00 01 0F		
	Compare buffers with same parameters	Result is +1	
15	Initialize compareBuffer		
	compareBuffer =		
	55 55 55 02 03 04 05 06 07 08		
	09 0A 0B 81		
	55 55 55 55		
	clear the handler		
	AppendTLV with TAG 0x0D and value 0x01		
	0x02 0x83	Result is 00h	
	Compare buffers compareValue()	Result is out	
	valueOffset = 2		
	compareOffset = 3		
	compareLength = 0x81		
16	Initialize compareBuffer		
	compareBuffer =		
	55 55 55 02 03 04 05 06 07 08		
	09 0A 0B 84		
	55 55 55 55		
	Compare buffers with same parameters	Result is -1	
17	Initialize compareBuffer		
	compareBuffer =		
	55 55 55 02 03 04 05 06 07 08		
	09 0A 0B 82		
	55 55 55 55 55		
	Compare buffers with same parameters	Result is +1	
18	Successful call, compareValue() with length =0	Result of compareValue() is 0	
	compareBuffer.length = 15		
	compareOffset = 15		
19	compareLength = 0 HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
19	Call post() method, then compareValue()	_AVAILABLE is thrown	
L	Can posity memou, mem compare value()	TVAULUDEE 19 (1110MII	

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

Test Area Reference: Api_2_Erh_Facyb_Bs.

5.2.3.10.1 Conformance requirement

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

5.2.3.10.1.1 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.

5.2.3.10.1.2 Parameter errors

- CRRP1: if dstBuffer is null NullPointerException shall be thrown.
- CRRP2: if dstOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

5.2.3.10.1.3 Context errors

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

5.2.3.10.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Facyb_Bs.java.

Test Applet: Api_2_Erh_Facyb_Bs_1.java.

Cap File: api_2_erh_facyb_bs.cap.

5.2.3.10.3 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	17

5.2.3.10.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialize the handler	•	•
	findAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	appendTLV() with TAG: 0D and length 16 Select Text String TLV		
	dstOffset ≥ dstBuffer.length findAndCopyValue() tag = 0Dh dstBuffer.length = 20 dstOffset = 20	ArrayIndexOutOfBoundsException is thrown	
3	<pre>dstOffset < 0 findAndCopyValue() dstBuffer.length = 20 dstOffset = -1</pre>	ArrayIndexOutOfBoundsException is thrown	
4	<pre>dstOffset + length >dstBuffer.length findAndCopyValue() dstBuffer.length = 20 dstOffset = 5</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
5	<pre>length > dstBuffer.length findAndCopyValue() dstBuffer.length = 15 dstOffset = 0</pre>	ArrayIndexOutOfBoundsException is thrown	
6	clear the handler, appendTLV() with TAG 02 and Length 02		
	Select a TLV (tag 02h)		
	<pre>findAndCopyValue() tag = 03h</pre>	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 findAndCopyValue() Tag = 0Dh dstBuffer.length = 17 dstOffset = 0	Result of findAndCopyValue() is 17	
8	Compare buffer buffer = 04 00 01 0F	Result is 00h	
9	Initialize dstBuffer dstBuffer = 55 55 55		
	Successful call findAndCopyValue() 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 findAndCopyValue() tag = 0Dh dstBuffer.length = 17 dstOffset = 0	Result of findAndCopyValue() is 17	
12	Compare buffer	Result is 00h	
L	buffer = 04 00 01 0F	<u> </u>	

ld	Description	API Expectation	APDU Expectation
13	clear the handler, appendTLV() with TAG: 0D and value: 04 00 01 0F		
	Successful call (with tag 8Dh) findAndCopyValue() tag = 8Dh dstBuffer.length = 17 dstOffset = 0	Result of findAndCopyValue() is 17	
14	Compare buffer buffer = 04 00 01 0F	Result is 00h	
15	Append tag 0Fh clear the Handler. AppendTLV() with tag 0x0F and value 01 02 80		
	Successful call (with tag 8Fh) findAndCopyValue() tag = 8Fh dstBuffer.length = 0x83 dstOffset = 3	Result of findAndCopyValue() is 0x83	
16	Compare buffer buffer = 55 55 55 00 01 80	Result is 00h	
17	HANDLER_NOT_AVAILABLE exception Call post() method, then findAndCopyValue()	ToolkitException.HANDLER_NOT _AVAILABLE is thrown	

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

Test Area Reference: Api_2_Erh_Facybbs_Bss.

5.2.3.11.1 Conformance requirement

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

5.2.3.11.1.1 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.

5.2.3.11.1.2 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.
- 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.

5.2.3.11.1.3 Context errors

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

5.2.3.11.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Facybbs_Bss.java.

Test Applet: Api_2_Erh_Facybbs_Bss_1.java.

Cap File: api_2_erh_facybbs_bss.cap.

5.2.3.11.3 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
P4	26
C1	25

5.2.3.11.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialize the handler		
	findAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	appendTLV() with TAG: 0D and length 16		
	dstOffset ≥ dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	tag = 0Dh, occurrence = 1		
	<pre>valueOffset = 0</pre>		
	dstBuffer.length = 5		
	dstOffset = 5		
	dstLength = 1		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = -1		
	dstLength = 1		
4	dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = 0		
	dstLength = 6		
5	dstOffset + dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = 3		
	dstLength = 3		

ld	Description	API Expectation	APDU Expectation
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	Do Expodution
ľ	findAndCopyValue()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = 0		
	dstLength = -1		
7	appendTLV() with TAG: 0D and length 6	T HIS G OUT OF THE	
	valueOffset ≥ Text String Length	ToolkitException.OUT_OF_TLV_	
	<pre>findAndCopyValue() tag = 0Dh, occurrence = 1</pre>	BOUNDARIES is thrown	
	valueOffset = 6		
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 1		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	<pre>findAndCopyValue() valueOffset = -1</pre>	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 1		
9	dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
	<pre>findAndCopyValue() valueOffset = 0</pre>	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 7		
10	valueOffset + dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
	findAndCopyValue()	BOUNDARIES is thrown	
	valueOffset = 2		
	<pre>dstBuffer.length = 15 dstOffset = 0</pre>		
	dstLength = 5		
11	clear the handler, appendTLV() with TAG 02		
	and Length 02		
	Select a TLV (tag 02h)		
	findAndCopyValue()	ToolkitException.UNAVAILABLE_	
	tag = 0Dh occurrence = 2	ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
	3 3	ELEMENT is thrown.	
12	clear the handler and appendTLV() with TAG:		
	0D and value: 04 00 01 0F		
	Successful call	Result of findAndCopyValue() is	
	findAndCopyValue()	17	
	tag = 0Dh, occurrence = 1		
	<pre>valueOffset = 0 dstBuffer.length = 17</pre>		
	dstOffset = 0		
	dstLength = 17		
13	Compare buffer	Result is 00h	
4.4	buffer = 04 00 01 0F		
14	Initialize dstBuffer dstBuffer = 55 55 55		
	Successful call	Result of findAndCopyValue() is	
	findAndCopyValue()	15	
	tag = 0Dh, occurrence = 1	'~	
	valueOffset = 2		
	dstBuffer.length = 20		
	<pre>dstOffset = 3 dstLength = 12</pre>		
15	Compare buffer	Result is 00h	
'3	buffer =	Troour is out	
	55 55 55 01 02		
	03 04 05 06 07		
	08 09 0A 0B 0C		
	55 55 55 55		

ld	Description	API Expectation	APDU Expectation
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	
	findAndCopyValue()	17	
	<pre>tag = 0Dh, occurrence = 1 valueOffset = 0</pre>		
	dstBuffer.length = 20		
	dstOffset = 0		
	dstLength = 17		
17	Compare buffer	Result is 00h	
40	buffer = 04 00 01 0F	D 14 (5 14 10) / 1 () : 0	
18	Successful call	Result of findAndCopyValue() is 6	
	<pre>findAndCopyValue() tag = 0Dh, occurrence = 2</pre>		
	valueOffset = 0		
	dstBuffer.length = 6		
	dstOffset = 0		
4.5	dstLength = 6	D 11: 001	
19	Compare buffer buffer = 00 11 22 33 44 55	Result is 00h	
20	clear the handler and appendTLV() with TAG:		
20	0D and value: 04 00 01 0F		
	Successful call (with tag 8Dh)	Result of findAndCopyValue() is	
	findAndCopyValue()	17	
	tag = 8Dh		
	occurrence = 1		
	valueOffset = 0		
	<pre>dstBuffer.length = 17 dstOffset = 0</pre>		
	dstLength = 17		
21	Compare buffer	Result is 00h	
	buffer = 04 00 01 0F		
22	Append tag 0Fh		
	<pre>buffer = 00 01 0F AppendTLV() with tag 0x0F and value 01 02</pre>		
	80		
	Successful call (with tag 8Fh)	Result of findAndCopyValue() is	
	findAndCopyValue()	0x80	
	tag = 8Fh		
	occurrence = 1 valueOffset = 0		
	dstBuffer.length = 0x83		
	dstOffset = 0		
	dstLength = 0x80		
23	Compare buffer	Result is 00h	
24	buffer = 00 01 80 55 55 55 Successful call, findAndCopyValue() with	Result of findAndCopyValue() is	
24	length =0	16	
	dstBuffer.length = 16	'	
	dstOffset = 16		
	dstLength = 0		
25	Invalid parameter	ToolkitException.BAD_INPUT_PA	
	findAndCopyValue()	RAMETER is thrown	
	occurrence = 0		
26	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then findAndCopyValue()	_AVAILABLE is thrown	

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

Test Area Reference: Api_2_Erh_Facrb_Bs.

5.2.3.12.1 Conformance requirement

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

5.2.3.12.1.1 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 Comprehension TLV is less than that in compareBuffer returns -1.
- CRRN5: if the first miscomparing byte in Comprehension TLV is greater than that in compareBuffer returns 1.
- CRRN6: The search method is comprehension required flag independent.

5.2.3.12.1.2 Parameter errors

- CRRP1: if compareBuffer is null NullPointerException shall be thrown.
- CRRP2: if compareOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

5.2.3.12.1.3 Context errors

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

5.2.3.12.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Facrb_Bs.java.

Test Applet: Api_2_Erh_Facrb_Bs_1.java.

Cap File: api_2_erh_facrb_bs.cap.

5.2.3.12.3 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	18

5.2.3.12.4 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	
	<pre>findAndCompareValue() tag = 0Dh</pre>	n is thrown	
	compareBuffer.length = 20		
	compareOffset = 20		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	compareBuffer.length = 20		
4	<pre>compareOffset = -1 compareOffset + length ></pre>	ArrayIndexOutOfBoundsExceptio	
-	compareBuffer.length	n is thrown	
	findAndCompareValue()		
	compareBuffer.length = 20		
<u> </u>	compareOffset = 5	1 1 1 0 10/5	
5	<pre>length > compareBuffer.length findAndCompareValue()</pre>	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)		
	findAndCompareValue()	ToolkitException.UNAVAILABLE_	
	tag = 03h	ELEMENT is thrown	
7	Verify current TLV	ToolkitException.UNAVAILABLE_	
8	getValueLength() clear the handler and appendTLV() with TAG:	ELEMENT is thrown.	
0	0D and value: 04 00 01 0F		
	Initialize compareBuffer		
	compareBuffer =		
	04 00 01 0F	Decut is 00h	
	Compare buffers tag = 0Dh	Result is 00h	
	compareOffset = 0		
9	Verify current TLV	Result is 17	
<u> </u>	getValueLength()		
10	Initialize compareBuffer		
	compareBuffer = 04 00 01 10		
	Compare buffers with same parameters	Result is -1	
11	Initialize compareBuffer		
	compareBuffer =		
	03 00 01 0F		
42	Compare buffers with same parameters	Result is +1	
12	Initialize compareBuffer		
	compareBuffer = 55 55 04 00 01		
	02 03 04 05 06		
	07 08 09 0A 0B		
	OC OD OE OF 55	D tri ool	
	Compare buffers	Result is 00h	
	compareOffset = 2		

ld	Description	API Expectation	APDU Expectation
13	Successful call with 2 TLVs		-
	clear() the Handler		
	AppendTLV() with tag 0x0D and value set		
	to 00 01 80 81		
	Append a second TLV with tag 0x0D and		
	value set to 00 11 22 33 44 55		
	Initialize compareBuffer		
	compareBuffer =		
	55 55 55 01 02		
	03 04 05 06 07		
	08 09 0A 0B 0C		
	OD OE OF 81		
	Compare buffers	Result is 00h	
	findAndCompareValue() the first TLV		
	compareOffset = 3		
14	Initialize compareBuffer		
	CompareBuffer =		
	55 55 55 01 02		
	03 04 05 06 07		
	08 09 0A 0B 0C		
	OD OE 7F 81	D 11: 1	
	Compare buffers	Result is -1	
	findAndCompareValue() the first TLV		
	compareOffset = 3		
15	Initialize compareBuffer		
	compareBuffer =		
	55 55 55 01 02		
	03 04 05 06 07 08 09 0A 0B 0C		
	OD OE 80 80		
	Compare buffers	Result is +1	
	compareOffset = 3	Nesult is +1	
16	clear the handler and appendTLV() with TAG:		
10	0D and value: 04 00 01 0F		
	Initialize compareBuffer		
	compareBuffer = 04 00 01 0F		
	Successful call (with tag 8Dh)	Result is 00h	
	findAndCompareValue()	1 toodit is oon	
	tag = 8Dh		
	compareBuffer.length = 17		
	compareOffset = 0		
17	Append tag 0Fh		
	buffer = 00 01 0F		
	Initialize compareBuffer		
	compareBuffer = 00 01 0F		
	Successful call (with tag 8Fh)	Result is 00h	
	findAndCompareValue()		
	tag = 8Fh		
	compareBuffer.length = 16		
	compareOffset = 0		
18	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then findAndCompareValue()	_AVAILABLE is thrown	

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

Test Area Reference: Api_2_Erh_Facrbbs_Bss.

5.2.3.13.1 Conformance requirement

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

5.2.3.13.1.1 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 Comprehension TLV is less than that in compareBuffer -1 is returned.
- CRRN5: if the first miscomparing byte in Comprehension TLV is greater than that in compareBuffer 1 is returned.
- CRRN6: The search method is comprehension required flag independent.

5.2.3.13.1.2 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.

5.2.3.13.1.3 Context errors

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

5.2.3.13.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Facrbbs_Bss.java.

Test Applet: Api_2_Erh_Facrbbs_Bss_1.java.

Cap File: api_2_erh_facrbbs_bss.cap.

5.2.3.13.3 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	27

5.2.3.13.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialize the handler		
	findAndCompareValue() with a null	NullPointerException is thrown	
	compareBuffer	,	
2	clear the handler and appendTLV() with TAG:		
	0D and value: 04 00 01 0F		
	compareOffset ≥ compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	tag = 0Dh, occurrence = 1		
	valueOffset = 0		
	<pre>compareBuffer.length = 5 compareOffset = 5</pre>		
	compareLength = 1		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	compareBuffer.length = 5		
	compareOffset = -1		
	compareLength = 1		
4	compareLength >compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	compareBuffer.length = 5		
	<pre>compareOffset = 0 compareLength = 6</pre>		
5	compareOffset + compareLength	ArrayIndexOutOfBoundsExceptio	
3	>compareBuffer.length	n is thrown	
	findAndCompareValue()	II IS UIIOWII	
	compareBuffer.length = 5		
	compareOffset = 3		
	compareLength = 3		
6	compareLength < 0	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	compareBuffer.length = 5		
	compareOffset = 0		
	compareLength = -1		

ld	Description	API Expectation	APDU Expectation
7	clear the handler and appendTLV() with TAG		•
	and length of 6		
	valueOffset ≥ Text String Length	ToolkitException.OUT_OF_TLV_	
	findAndCompareValue()	BOUNDARIES is thrown	
	tag = 0Dh, occurrence = 1		
	valueOffset = 6		
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 1	Tablide Constitution OUT OF TIME	
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	<pre>findAndCompareValue() valueOffset = -1</pre>	BOUNDARIES is thrown	
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 1		
9	compareLength > Text String length	ToolkitException.OUT_OF_TLV_	
	findAndCompareValue()	BOUNDARIES is thrown	
	<pre>valueOffset = 0</pre>		
	compareBuffer.length = 15		
	compareOffset = 0		
40	compareLength = 7	Tablide Constitution OUT OF TIME	
10	valueOffset + compareLength > Text String	ToolkitException.OUT_OF_TLV_	
	length	BOUNDARIES is thrown	
	<pre>findAndCompareValue() valueOffset = 2</pre>		
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 5		
11	Invalid parameter	ToolkitException.BAD_INPUT_PA	
	occurrence = 0	RAMETER is thrown	
12	appendTLV() with TAG 02 and length 02		
	Select a TLV (tag 02h)		
	findAndCompareValue()	ToolkitException.UNAVAILABLE_	
	tag = 0Dh	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		
	Initialize compareBuffer		
	compareBuffer =		
	04 00 01 0F	Deput is 00h	
	<pre>findAndCompareValue() tag = 0Dh, occurrence = 1</pre>	Result is 00h	
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 17		
15	Verify current TLV	Result is 17	
	getValueLength()		
16	Initialize compareBuffer		
	compareBuffer =		
	04 00 01 10		
	Compare buffers with same parameters	Result is -1	
17	Initialize compareBuffer		
	compareBuffer =		
	03 00 01 0F	D 16: 4	
	Compare buffers with same parameters	Result is +1	

ld	Description	API Expectation	APDU Expectation
18	Initialize compareBuffer	Exposition	C =Apoctation
	clear() the handler.		
	AppendTLV with tag $0x0D$ and data = 01 02		
	03 80 81		
	compareBuffer = 55 55 55 01 02		
	03 04 05 06 07		
	08 09 0A 0B 0C		
	OD OE 80 81		
	Compare buffers	Result is 00h	
	findAndCompareValue()		
	tag = 0x0D occurrence = 1		
	valueOffset = 0		
	compareOffset = 3		
	compareLength = 0x81		
19	Initialize compareBuffer		
	compareBuffer =		
	55 55 55 01 02 03 04 05 06 07		
	08 09 0A 0B 0C		
	0D 0E 7F 81		
	findAndCompareValue() with same parameters	Result is -1	
20	Initialize compareBuffer		
	compareBuffer =		
	55 55 55 01 02		
	03 04 05 06 07		
	08 09 0A 0B 0C 0D 0E 80 80		
	findAndCompareValue() with same	Result is +1	
	parameters	Tresuit is +1	
21	append a second Text String TLV		
	tag = 0Dh		
	buffer = 00 11 22 33 44 55		
	Initialize compareBuffer		
	compareBuffer = 55 55 55 01 80 81		
	findAndCompareValue()	Result is 00h	
	tag = 0Dh, occurrence = 1	rtodak id dari	
	valueOffset = 0		
	compareOffset = 3		
	compareLength = 0x81		
22	Initialize compareBuffer		
	<pre>compareBuffer = 00 11 22 33 44 55</pre>		
	findAndCompareValue()	Result is 00h	
	tag = 0Dh, occurrence = 2	Trocur is con	
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 6		
23	Initialize compareBuffer		
	compareBuffer = 00 11 22 33 44 66		
	findAndCompareValue()	Result is -1	
	tag = 0Dh, occurrence = 2		
	valueOffset = 0		
	compareOffset = 0		
24	compareLength = 6		
24	clear the handler and appendTLV() with TAG: 0D and value: 04 00 01 0F		
-			
	Initialize compareBuffer compareBuffer = 04 00 01 0F		
	Successful call (with tag 8Dh)	Result is 00h	
	findAndCompareValue()	Treating out	
	tag = 8Dh, occurrence = 1		
	<pre>valueOffset = 0</pre>		
	compareBuffer.length = 17		
	<pre>compareOffset = 0 compareLength = 17</pre>		
	combatenenden - TI		

ld	Description	API Expectation	APDU Expectation
25	Append tag 0Fh		
	buffer = 00 01 0F		
	Initialize compareBuffer		
	compareBuffer = 00 01 0F		
	Successful call (with tag 8Fh)	Result is 00h	
	findAndCompareValue()		
	tag = 8Fh, occurrence = 1		
	<pre>valueOffset = 0</pre>		
	compareBuffer.length = 16		
	compareOffset = 0		
	compareLength = 16		
26	Successful call, findAndCompareValue() with	Result of findAndCompareValue	
	length =0	() is 00	
	CompareBuffer.length = 16		
	compareOffset = 16		
	compareLength = 0		
27	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then	AVAILABLE is thrown	
	findAndCompareValue()		

5.2.3.14 Method appendArray

Test Area Reference: Api_2_Erh_Apda.

5.2.3.14.1 Conformance requirement

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

5.2.3.14.1.1 Normal execution

- CRRN1: appends a buffer into the EditHandler buffer.
- CRRN2: a successful append does not modify the TLV selected.

5.2.3.14.1.2 Parameter errors

- 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.

5.2.3.14.1.3 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.

5.2.3.14.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Apda_Bss.java.

Test Applet: Api_2_Erh_Apda_Bss_1.java.

Cap File: api_2_erh_apda_bss.cap.

5.2.3.14.3 Test coverage

CRR number	Test case number
N1	9, 10, 11
N2	8
P1	1
P2	2, 3, 4, 5, 6
C1	7
C2	12

5.2.3.14.4 Test procedure

ld	Description	API Expectation	APDU Expectation
	Initialize the envelope response handler with a	7 1 = A poo ts	7 2 0
	TLV of length 1		
1	Null buffer	NullPointerException is thrown	
2	offset ≥ buffer.length	ArrayIndexOutOfBoundsExceptio	
	appendArray()	n is thrown	
	buffer.length = 5		
	offset = 5		
	length = 1		
3	offset < 0	ArrayIndexOutOfBoundsExceptio	
	appendArray()	n is thrown	
	buffer.length = 5		
	offset = -1		
4	length = 1	A d- d O+O-(D	
4	length > buffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>appendArray() buffer.length = 5</pre>	n is thrown	
	offset = 0		
	length = 6		
5	offset + length > buffer.length	ArrayIndexOutOfBoundsExceptio	
"	appendArray()	n is thrown	
	buffer.length = 5		
	offset = 3		
	length = 3		
6	length < 0	ArrayIndexOutOfBoundsExceptio	
	appendArray()	n is thrown	
	buffer.length = 5		
	offset = 0 length = -1		
7	Handler overflow exception	ToolkitException.HANDLER_OVE	
<i>'</i>	appendArray()	RFLOW is thrown	
	buffer.length = getCapacity()+1	KFLOW IS UITOWIT	
	offset = 0		
	<pre>length = getCapacity()+1</pre>		
8	append the handler with TLVs:		
	81 03 11 22 33		
	82 02 99 77		
	findTLV() 0x81		
	Successful call		
	appendArray()		
	buffer = FF FE F8		
	offset = 0		
-	length = 8	D It is odd	
	Verify Current TLV: Call getValueLength()	Result is 03h	

ld	Description	API Expectation	APDU Expectation
9	Clear the handler		
	Successful call		
	appendArray()		
	buffer = FF FE F8		
	offset = 0		
	length = 8		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = FF FE F8		
10	Successful call		
	appendArray()		
	buffer = 00 01 07		
	offset = 2		
	length = 6		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = FF FE F8 02 03 07		
11	Successful call		
	appendArray()		
	buffer = 11 22 88		
	offset = 2		
	length = 4		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = FF FE F8 02 03 07 33		
	44 55 66		
12	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then appendArray()	_AVAILABLE is thrown	

5.2.3.15 Method appendTLV(byte tag, byte value)

Test Area Reference: Api_2_Erh_Aptlbb.

5.2.3.15.1 Conformance requirement

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

5.2.3.15.1.1 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.

5.2.3.15.1.2 Parameter errors

No requirements.

5.2.3.15.1.3 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.

5.2.3.15.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Aptlbb.java.

Test Applet: Api_2_Erh_Aptlbb_1.java.

Cap File: api_2_erh_aptlbb.cap.

5.2.3.15.3 Test coverage

CRR number	Test case number
N1	3, 4
N2	2
C1	1
C2	5

5.2.3.15.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call appendArray()		
	<pre>length = getCapacity()-1</pre>		
	Handler Overflow exception:	ToolkitException.HANDLER_OVE	
	Call appendTLV() method	RFLOW 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	
	method		
3	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 84h		
	value = 00h		
	Call copy() method		
	Compare handler	Result is 00h	
ļ	compareBuffer = 84 01 00		
4	Successful call		
	appendTLV()		
	tag = 01h value = Feh		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = 84 01 00 01 01 FE	INGSUIL IS OUT	
5	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then appendTLV()	AVAILABLE is thrown	
	Call post() method, then appendTLV()	_AVAILABLE is thrown	

5.2.3.16 Method appendTLV(byte tag, byte value1, byte value2)

Test Area Reference: Api_2_Erh_Aptlbbb.

5.2.3.16.1 Conformance requirements

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

5.2.3.16.1.1 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.

5.2.3.16.1.2 Parameter errors

No requirements.

5.2.3.16.1.3 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.

5.2.3.16.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Aptl Bbb.java.

Test Applet: Api_2_Erh_Aptl Bbb_1.java.

Cap File: api_2_erh_aptl bbb.cap.

5.2.3.16.3 Test coverage

CRR number	Test case number
N1	3, 4
N2	2
C1	1
C2	5

5.2.3.16.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call the appendArray() with length of		•
	getCapacity()-1		
	Handler Overflow exception:	ToolkitException.HANDLER_OVE	
	Call appendTLV() method	RFLOW 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 appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	
	method		
3	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 84h		
	value1 = 00h		
	value2 = 01h		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = 84 02 00 01		

ld	Description	API Expectation	APDU Expectation
4	Successful call		
	appendTLV()		
	tag = 01h		
	value1 = FEh		
	value2 = FDh		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = 84 02 00 01 01 02 FE FD		
5	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then appendTLV()	_AVAILABLE is thrown	

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

Test Area Reference: Api_2_Erh_Aptlb_Bss.

5.2.3.17.1 Conformance requirement

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

5.2.3.17.1.1 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.

5.2.3.17.1.2 Parameter errors

- 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.

5.2.3.17.1.3 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.

5.2.3.17.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Aptlb_Bss.java.

Test Applet: Api_2_Erh_Aptlb_Bss_1.java.

Cap File: api_2_erh_aptlb_bss.cap.

5.2.3.17.3 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	14
C3	8

5.2.3.17.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Null value	NullPointerException is thrown	-
2	valueOffset ≥ value.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value.length = 5		
	valueOffset = 5		
	valueLength = 1		
3	valueOffset < 0	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value.length = 5		
	valueOffset = -1		
	valueLength = 1		
4	valueLength > value.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value.length = 5		
	valueOffset = 0		
	valueLength = 6		
5	ValueOffset + valueLength > value.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value.length = 5		
	<pre>valueOffset = 3 valueLength = 3</pre>		
6	valueLength < 0	Array Inday Out Of Day and a Evantin	
О		ArrayIndexOutOfBoundsExceptio	
	<pre>appendTLV() value.length = 5</pre>	n is thrown	
	valueOffset = 0		
	valueLength = -1		
7	Handler overflow exception	ToolkitException.HANDLER_OVE	
'	Call the appendArray() with length of	RFLOW is thrown	
	getCapacity()-1, appendTLV()		
	value.length = 256		
	valueOffset = 0		
	valueLength = 254		
8	Bad parameter exception	ToolkitException.BAD_INPUT_PA	
	Clear the handler, appendTLV()	RAMETER is thrown	
	value.length = 256		
	valueOffset = 0		
	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		
	appendTLV()		
	tag = 04		
	value = FF FE F8		
	valueOffset = 0		
	valueLength = 8		
1	Verify Current TLV: Call getValueLength()	Result is 03h	

ld	Description	API Expectation	APDU Expectation
10	Clear the handler		-
	Successful call		
	appendTLV()		
	tag = 04		
	value = FF FE F8		
	<pre>valueOffset = 0</pre>		
	valueLength = 8		
	Call copy() method		
	Compare handler	Result is 00	
	CompareBuffer = 04 08 FF FE F8		
11	Successful call		
	appendTLV()		
	tag = 85h		
	value = 00 01 07		
	valueOffset = 2		
	valueLength = 6		
	Call copy() method		
	Compare handler	Result is 00	
	compareBuffer = 04 08 FF FE F8 85 06 02		
	03 07		
12	Successful call		
	appendTLV()		
	tag = 01		
	value = 11 22 88		
	<pre>valueOffset = 2 valueLength = 4</pre>		
	Call copy() method	Describie 00	
	Compare handler	Result is 00	
	compareBuffer = 04 08 FF FE F8 85 06 02 03 07 01 04 33 44 55 66		
13	Clear the handler		
13	Successful call		
	appendTLV() tag = 04		
	value = 00 01 7F		
	value0ffset = 0		
	valueLength = 80h		
	Call copy() method		
	Compare handler	Result is 00	
	compareBuffer = 04 81 80 00 017F		
14	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then appendTLV()	_AVAILABLE is thrown	

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

Test Area Reference: Api_2_Erh_Aptlbb_Bss.

5.2.3.18.1 Conformance requirement

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

5.2.3.18.1.1 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.

5.2.3.18.1.2 Parameter errors

- 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.

5.2.3.18.1.3 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 254, a ToolkitException is thrown with reason code BAD INPUT PARAMETER.

5.2.3.18.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Aptlbb_Bss.java.

Test Applet: Api_2_Erh_Aptlbb_Bss_1.java.

Cap File: api_2_erh_aptlbb_bss.cap.

5.2.3.18.3 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	14
C3	8

5.2.3.18.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Null value2	NullPointerException is thrown	
2	value2Offset ≥ value2.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value2.length = 5		
	value20ffset = 5		
	value2Length = 1		
3	value2Offset < 0	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value2.length = 5		
	value20ffset = -1		
	value2Length = 1		
4	value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value2.length = 5		
	value20ffset = 0		
	value2Length = 6		
5	value2Offset + value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value2.length = 5		
	value2Offset = 3		
	value2Length = 3		

ld	Description	API Expectation	APDU Expectation
6	value2Length < 0	ArrayIndexOutOfBoundsExceptio	= 0
	appendTLV()	n is thrown	
	value2.length = 5	III lo unown	
	value2Offset = 0		
ļ	value2Length = -1		
7	Handler overflow exception	ToolkitException.HANDLER_OVE	
	Call the appendArray() with length of	RFLOW is thrown	
	getCapacity()-1		
	appendTLV()		
	value2.length = 256		
	value20ffset = 0		
8	value2Length = 254 Bad parameter exception	ToolkitException.BAD_INPUT_PA	
0	Clear the handlerappendTLV()	RAMETER is thrown	
	value2.length = 256	RAIVIETER IS UTIOWIT	
	value2Offset = 0		
	value2Length = 256		
9	clear the handler, append the handler with		
	TLVs:		
	81 03 11 22 33		
<u> </u>	82 02 99 77		
	Select Command Details TLV		
	Successful call		
	appendTLV()		
	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		
	appendTLV()		
	tag = 04		
	value1 = 05		
	<pre>value2 = FF FE F8 value2Offset = 0</pre>		
	value2Length = 8		
	Call copy() method		
	Compare handler	Result is 00	
	CompareBuffer = 04 09 05 FF FE F8	i toodii to oo	
11	Successful call		
	appendTLV()		
	tag = 85h		
	value1 = 55h		
	<pre>value2 = 00 01 07 value20ffset = 2</pre>		
	value2Length = 6		
	Call copy() method		
	Compare handler	Result is 00	
	compareBuffer =		
	04 09 05 FF FE F8		
	85 07 55 02 03 07		
12	Successful call		
	appendTLV()		
	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		

ld	Description	API Expectation	APDU Expectation
13	Clear the handler		
	Successful call		
	appendTLV()		
	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		
14	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then appendTLV()	_AVAILABLE is thrown	

5.2.3.19 Method clear

Test Area Reference: Api_2_Erh_Cler.

5.2.3.19.1 Conformance requirement

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

Public void clear() throws ToolkitException

5.2.3.19.1.1 Normal execution

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

5.2.3.19.1.2 Parameter errors

No requirements.

5.2.3.19.1.3 Context errors

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

5.2.3.19.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Cler.java.

Test Applet: Api_2_Erh_Cler_1.java.

Cap File: api_2_erh_cler.cap.

5.2.3.19.3 Test coverage

CRR number	Test case number
N1	1, 2
C1	3

5.2.3.19.4 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	
3	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call appendTLV() method, then post() and	_AVAILABLE is thrown	
	then clear()		

5.2.3.20 Method getCapacity

Test Area Reference: Api_2_Erh_Gcap.

5.2.3.20.1 Conformance requirement

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

public byte getCapacity()

5.2.3.20.1.1 Normal execution

• CRRN1: The method shall return the maximum size of the Comprehension TLV list managed by the handler.

5.2.3.20.1.2 Parameter errors

No requirements

5.2.3.20.1.3 Context errors

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

5.2.3.20.2 Test area files

Test Source: Test_Api_2_Erh_Gcap.java.

Test Applet: Api_2_Erh_Gcap_1.java.

Cap File: api_2_erh_gcap.cap.

5.2.3.20.3 Test coverage

CRR number Test case number	
N1	1
C1	Tested in CAT Runtime Environment part: FWK MHA ERHD

5.2.3.20.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	EnvelopeResponseHandler available		
	1- Send envelope Menu Selection 2- The applet calls getTheHandler() method 3- The applet calls getCapacity() method on the EnvelopeResponseHandler 4- The applet fills the handler with the maximum capacity using AppendTLV() method 5- The applet calls clear() method on the EnvelopeResponseHandler	1- Applet is triggered2- No exception is thrown3- No exception is thrown4- No exception is thrown5- No exception is thrown	
	6- The applet fills the handler with the maximum capacity plus one, using AppendTLV() method	6- HANDLER_OVERFLOW exception is thrown	

5.2.3.21 Method getValueShort

Test Area Reference: Api_2_Erh_Gvsh.

5.2.3.21.1 Conformance requirement

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

5.2.3.21.1.1 Normal execution

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

5.2.3.21.1.2 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.

5.2.3.21.1.3 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.

5.2.3.21.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Gvsh.java.

Test Applet: Api_2_Erh_Gvsh_1.java.

Cap File: api_2_erh_gvsh.cap.

5.2.3.21.3 Test coverage

CRR number	Test case number
N1	3, 4, 5, 6, 7, 8
P1	2
C1	9
C2	1

5.2.3.21.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	appendTLV() 82 02 81 82, appendTLV() 81 03		
	11 22 FE		
	findTLV() with TAG 03		
	getValueShort(0)	ToolkitException.UNAVAILABLE_ ELEMENT is thrown	
2	Search TLV 01h		
	getValueShort(3)	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
3	Search TLV 01h		
	getValueShort(1)	Result is 22h FEh	
4	Search TLV 02h		
	getValueShort(0)	Result is 81h 82h	
5	appendTLV() with TAG 0D, Length 0x7E, Value: 00, 01,, 7D		
	getValueShort(7C)	Result is 7Ch 7Dh	
6	clear the handler, appendTLV() with TAG	Noodkiio Telli Telli	
	0D, Length 0x80, Value: 00, 01,, 7F qetValueShort(7D)	Decut is 7Dh 7Fh	
7	getValueShort(7E)	Result is 7Dh 7Eh	
	1	Result is 7Eh 7Fh	
8	clear the handler, appendTLV() with TAG OD, Length 0xF1, Value: 00, 01,, F0		
	getValueShort(EF)	Result is EFh F0h	
9	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then getValueShort()	_AVAILABLE is thrown	

5.2.3.22 Method appendTLV(byte tag, byte value1, short value2)

Test Area Reference: Api_2_Erh_Aptlbbs.

5.2.3.22.1 Conformance requirements

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

5.2.3.22.1.1 Normal execution

- CRRN1: Appends a TLV element to the current TLV list (3-byte element(1-byte,1-short)).
- CRRN2: A successful append does not modify the TLV selected.

5.2.3.22.1.2 Parameter errors

No requirements.

5.2.3.22.1.3 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.

5.2.3.22.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Aptlbbs.java.

Test Applet: Api_2_Erh_Aptlbbs_1.java.

Cap File: api_2_erh_aptlbbs.cap.

5.2.3.22.3 Test coverage

CRR number	Test case number
N1	3, 4
N2	2
C1	1
C2	5

5.2.3.22.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call the appendArray() with length of		
	getCapacity()-1		
	Handler Overflow Exception:	ToolkitException.HANDLER_O	
	Call appendTLV() method	VERFLOW is thrown	
2	clear the handler, append the handler with TLVs:		
	81 03 11 22 33		
	82 03 99 77 00		
	Select Command Details TLV		
ļ	Call appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	
	method		
3	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 84h		
	value1 = 00h value2 = 01h 02h		
-	Call copy() method		
-	Compare handler	Result is 00h	
	compareBuffer = 84 03 00 01 02	Troodic to com	
4	Successful call		
	appendTLV()		
	tag = 01h		
	value1 = FEh		
	value2 = FDh FCh		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = 84 03 00 01 02 01 03 FE FD FC		
5	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_N	
	Call post() method, then AppendTLV()	OT_AVAILABLE is thrown	

5.2.3.23 Method appendTLV(byte tag, short value)

Test Area Reference: Api_2_Erh_Aptlbs.

5.2.3.23.1 Conformance requirements

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

5.2.3.23.1.1 Normal execution

- CRRN1: Appends a TLV element to the current TLV list (2-byte or 1-short element).
- CRRN2: A successful append does not modify the TLV selected.

5.2.3.23.1.2 Parameter errors

No requirements.

5.2.3.23.1.3 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.

5.2.3.23.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Aptlbs.java.

Test Applet: Api_2_Erh_Aptlbs_1.java.

Cap File: api_2_erh_aptlbs.cap.

5.2.3.23.3 Test coverage

CRR number	Test case number
N1	3, 4
N2	2
C1	1
C2	5

5.2.3.23.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call appendArray()		
	<pre>length = getCapacity()-1</pre>		
	Handler Overflow Exception:	ToolkitException.HANDLER_OVE	
	Call appendTLV() method	RFLOW is thrown	
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	
	method		
3	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 84h		
	value = 00h 01h		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = 84 02 00 01		

ld	Description	API Expectation	APDU Expectation
4	Successful call		
	appendTLV()		
	tag = 01h		
	value = FEh FFh		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = 84 02 00 01 01 02 FE FF		
5	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then AppendTLV()	_AVAILABLE is thrown	

5.2.3.24 Method appendTLV(byte tag, short value1, short value2)

Test Area Reference: Api_2_Erh_Aptlbss.

5.2.3.24.1 Conformance requirements

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

5.2.3.24.1.1 Normal execution

- CRRN1: Appends a TLV element to the current TLV list (4-byte element(2-short)).
- CRRN2: A successful append does not modify the TLV selected.

5.2.3.24.1.2 Parameter errors

No requirements.

5.2.3.24.1.3 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.

5.2.3.24.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Aptlbss.java.

Test Applet: Api_2_Erh_Aptlbss_1.java.

Cap File: api_2_erh_aptlbss.cap.

5.2.3.24.3 Test coverage

CRR number	lest case number
N1	3, 4
N2	2
C1	1
C2	5

5.2.3.24.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call the appendArray() method with length		
	equal getCapacity()-1		
	Handler Overflow Exception:	ToolkitException.HANDLER_OVE	
	Call appendTLV() method	RFLOW 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 appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	
	method		
3	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 84h		
	value1 = 00h 01h		
	value2 = 02h 03h		
	Call copy() method	D. H. COL	
	Compare handler	Result is 00h	
	compareBuffer = 84 04 00 01 02 03		
4	Successful call		
	<pre>appendTLV() tag = 01h</pre>		
	value1 = FEh FDh		
	value2 = FCh FBh		
	Call copy() method		
	Compare handler	Result is 00h	
	compareBuffer = 84 04 00 01 02 03 01 04 FE FD		
	FC FB		
5	HANDLER NOT AVAILABLE exception	ToolkitException.HANDLER NOT	
	Call post() method, then appendTLV()	_AVAILABLE is thrown	

5.2.3.25 Method appendTLV(byte tag, byte[] value1, short value1Offset, short value1Length, byte[] value2, short value2Offset, short value2Length)

Test Area Reference: Api_2_Erh_Aptlb_Bss_Bss.

5.2.3.25.1 Conformance requirements

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

5.2.3.25.1.1 Normal execution

- CRRN1: Appends a TLV element to the current TLV list (2 byte arrays format).
- CRRN2: A successful append does not modify the TLV selected.

5.2.3.25.1.2 Parameter errors

- CRRP1: If value1 or value2 is null, a NullPointerException is thrown.
- CRRP2: If value1Offset or value1Length or both would cause access outside value1 array bounds, or if value1Length is negative, an ArrayIndexOutOfBoundsException is thrown.
- CRRP3: If value2Offset or value2Length or both would cause access outside value2 array bounds, or if value2Length is negative, an ArrayIndexOutOfBoundsException is thrown.

5.2.3.25.1.3 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 value1Length or value2Length is greater than 255, a ToolkitException is thrown with reason code BAD_INPUT_PARAMETER.

5.2.3.25.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Erh_Aptlb_Bss_Bss.java.

Test Applet: Api_2_Erh_Aptlb_Bss_Bss_1.java.

Cap File: api_2_erh_aptlb_bss_bss.cap.

5.2.3.25.3 Test coverage

CRR number	Test case number
N1	18, 19, 20
N2	17
P1	1, 2
P2	3, 4, 5, 6, 7
P3	8, 9, 10, 11, 12
C1	13
C2	21
C3	14. 15

5.2.3.25.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Null value1	NullPointerException is thrown	
2	Null value2	NullPointerException is thrown	
3	Value1Offset ≥ value1.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value1.length = 5		
	value10ffset = 5		
	value1Length = 1		
	value2.length = 5		
	value2Offset = 0		
	value2Length = 1		
4	Value1Offset < 0	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value1.length = 5		
	value10ffset = -1		
	value1Length = 1		
	value2.length = 5		
	value2Offset = 0		
	value2Length = 1		

ld	Description	API Expectation	APDU Expectation
5	Value1Length > value1.length	ArrayIndexOutOfBoundsExceptio	-
	appendTLV()	n is thrown	
	<pre>value1.length = 5 value10ffset = 0</pre>		
	value1Length = 6		
	value2.length = 5		
	value2Offset = 0		
6	value2Length = 1 Value1Offset + value1Length > value1.length	ArrayIndexOutOfBoundsExceptio	
0	appendTLV()	n is thrown	
	Value1.length = 5	II IS UIIOWII	
	value10ffset = 3		
	<pre>value1Length = 3 value2.length = 5</pre>		
	value2Offset = 0		
	value2Length = 1		
7	Value1Length < 0	ArrayIndexOutOfBoundsExceptio	
	<pre>appendTLV() value1.length = 5</pre>	n is thrown	
	value10ffset = 0		
	value1Length = -1		
	<pre>value2.length = 5 value20ffset = 0</pre>		
	value2Dirset = 0 value2Length = 1		
8	Value2Offset ≥ value2.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	<pre>value1.length = 5 value10ffset = 0</pre>		
	<pre>value10ffset = 0 value1Length = 1</pre>		
	value2.length = 5		
	value2Offset = 5		
9	value2Length = 1 Value2Offset < 0	ArrayIndexOutOfBoundsExceptio	
9	appendTLV()	n is thrown	
	value1.length = 5	II IS UIIOWII	
	value10ffset = 0		
	<pre>value1Length = 1 value2.length = 5</pre>		
	value20ffset = -1		
	value2Length = 1		
10	Value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
	<pre>appendTLV() value1.length = 5</pre>	n is thrown	
	value10ffset = 0		
	value1Length = 1		
	<pre>value2.length = 5 value2Offset = 0</pre>		
	value2Length = 6		
11	Value2Offset + value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	<pre>value1.length = 5 value10ffset = 0</pre>		
	value1011set = 0 value1Length = 1		
	Value2.length = 5		
	<pre>Value2Offset = 3 Value2Length = 3</pre>		
12	Value2Length < 0	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value1.length = 5		
	<pre>value10ffset = 0 value1Length = 1</pre>		
	value2.length = 5		
	value2Offset = 0		
10	value2Length = -1	ToolkitEveentien LIANDLED OVE	
13	Handler overflow Exception Call the appendArray() with length of	ToolkitException.HANDLER_OVE RFLOW is thrown	
	getCapacity()-1	IN LOW IS UITOWIT	
	appendTLV()		
	Value1.length = 256		
	<pre>Value1Offset = 0 Value1Length = 1</pre>		
	Value2.length = 256		
	Value2Offset = 0		
	Value2Length = 1		

ld	Description	API Expectation	APDU Expectation
14	Bad parameter Exception	ToolkitException.BAD_INPUT_PA	- 4
1 .	Clear the handler	RAMETER is thrown	
	appendTLV()		
	Value1.length = 256		
	Value1Offset = 0 Value1Length = 256		
	Value2.length = 256		
	Value2Offset = 0		
	Value2Length = 1		
15	Bad parameter Exception	ToolkitException.BAD_INPUT_PA	
	appendTLV()	RAMETER is thrown	
	Value1.length = 256		
	<pre>Value1Offset = 0 Value1Length = 1</pre>		
	Value2.length = 256		
	Value2Offset = 0		
	Value2Length = 256		
	clear the handler, append the handler with		
	TLVs:		
	81 03 11 22 33		
-	82 02 99 77 Select Command Details TLV		
16			
16	Successful call appendTLV()		
	tag = 04		
	value1 = FF FE F8		
	value10ffset = 0		
	value1Length = 8		
	value2 = F7 F6 F0		
	<pre>value2Offset = 0 value2Length = 8</pre>		
	Verify Current TLV: Call getValueLength()	Result is 03h	
<u> </u>	Clear the handler	Result is USII	
17	Successful call		
''	appendTLV()		
	tag = 04		
	value1 = FF FE F8		
	value10ffset = 0		
	<pre>value1Length = 8 value2 = F7 F6 F0</pre>		
	value2Offset = 0		
	value2Length = 8		
	Call copy() method		
	Compare handler	Result is 00	
	CompareBuffer = 04 10 FF FE F0		
18	Successful call		
	appendTLV() tag = 85h		
	rag = 85n value1 = 00 01 07		
	value10ffset = 2		
	value1Length = 6		
	value2 = 08 09 0F		
	<pre>value2Offset = 2 value2Length = 6</pre>		
-	Call copy() method		
	Compare handler	Result is 00	
	compareBuffer = 04 10 FF FE F0 85 0C 02	IVeanit is 00	
	03 04 05 06 07 0A 0B 0C 0D 0E 0F		
19	Successful call		
	appendTLV()		
	tag = 01		
	value1 = 11 22 88		
	<pre>value1Offset = 2 value1Length = 4</pre>		
	value1Length = 4 value2 = 99 AA FF 00		
1	value2Offset = 2		
	value2Length = 4		
	Call copy() method		
•	·	•	

ld	Description	API Expectation	APDU Expectation
	Compare handler	Result is 00	
	compareBuffer = 04 10 FF FE F0 85 0C 02		
	03 04 05 06 07 0A 0B 0C 0D 0E 0F 01 08 33		
	44 55 66 BB CC DD EE		
	Clear the handler		
20	Successful call		
	appendTLV()		
	tag = 04		
	value1 = 00 01 7F		
	value1Offset = 0		
	value1Length = 80h		
	value2 = 80 81 FC		
	value2Offset = 0		
	value2Length = 7Dh		
	Call copy() method		
	Compare handler	Result is 00	
	compareBuffer = 04 81 FD 00 01FC		
21	HANDLER_NOT_AVAILABLE exception	ToolkitException.HANDLER_NOT	
	Call post() method, then appendTLV()	_AVAILABLE is thrown	

5.2.4 Interface ProactiveHandler

5.2.4.1 Method init

Test Area Reference: Api_2_Pah_Init.

5.2.4.1.1 Conformance requirement

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

5.2.4.1.1.1 Normal execution

- CRRN1: The init() method initializes the next Proactive command in the ProactiveHandler, with Command details and Device Identities TLV. The source device is always the UICC 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 initializing 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.

5.2.4.1.1.2 Parameter errors

No requirements.

5.2.4.1.1.3 Context errors

No requirements.

5.2.4.1.2 Test area files

Test Source: Test_Api_2_Pah_Init.java.

Test Applet: Api_2_Pah_Init_1.java.

Cap File: api_2_pah_init.cap.

5.2.4.1.3 Test coverage

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

5.2.4.1.4 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 identical	
	reference =		
	81h 03h xxh 01h 02h		
	82h 02h 81h 03h		
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 identical	
	reference =		
	81h 03h xxh FFh FEh		
	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()	

5.2.4.2 Method initDisplayText

Test Area Reference: Api_2_Pah_Indt.

5.2.4.2.1 Conformance requirement

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

5.2.4.2.1.1 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 initializes 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.
- CRRN6: If length is equal to zero, then the Text String TLV inserted in the command is a null text string TLV as defined in ETSI TS 101 267 [11].

5.2.4.2.1.2 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.

5.2.4.2.1.3 Context errors

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

5.2.4.2.2 Test area files

Test Source: Test_Api_2_Pah_Indt.java.

Test Applet: Api_2_Pah_Indt_1.java.

Cap File: api_2_pah_indt.cap.

5.2.4.2.3 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
N6	16
P1	1
P2	2, 3, 4, 5, 6
C1	21

5.2.4.2.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	NULL as parameter to buffer	NullPointerException is thrown	
	initDisplayText()	·	
	buffer = NULL		
2	offset > buffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>initDisplayText()</pre>	n is thrown	
	buffer = "Text"		
	offset = 5		
	length = 0		
3	offset < 0	ArrayIndexOutOfBoundsExceptio	
	<pre>initDisplayText()</pre>	n is thrown	
	buffer = "Text"		
	offset = -1		
4	length > buffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>initDisplayText()</pre>	n is thrown	
	buffer = "Text"		
	offset = 0		
	length = 5		

ld	Description	API Expectation	APDU Expectation
5	offset + length > buffer.length	ArrayIndexOutOfBoundsExceptio	_
	<pre>initDisplayText() buffer = "Text"</pre>	n is thrown	
	offset = 3		
	length = 2		
6	length < 0	ArrayIndexOutOfBoundsExceptio	
	<pre>initDisplayText() buffer = "Text"</pre>	n is thrown	
	offset = 3		
7	length = -1 Successful call, buffer is the whole buffer	No exception is thrown	
l ′	<pre>initDisplayText()</pre>	INO exception is thrown	
	qualifier = 0		
	<pre>dcs = 4 buffer = "TextA"</pre>		
	offset = 0		
	length = 5 Verify the command number value	Command number between 01h	
	verify the command number value	and FEh	
8	Send the command		DISPLAY TEXT Proactive
			command
			qualifier = 00h
			dcs = 4
	Cuspendful cell buffer is part of a buffer with		Text = "TextA"
9	Successful call, buffer is part of a buffer with the end part		DISPLAY TEXT Proactive command
	Send the command		
	initDisplayText()		qualifier = 00h dcs = 4
	qualifier = 0 dcs = 4		Text = "TextB"
	buffer = "12TextB"		
	offset = 2 length = 5		
10	Successful call, buffer is part of a buffer with		DISPLAY TEXT Proactive
	the first part		command
	Send the command initDisplayText()		qualifier = 00h
	qualifier = 0		dcs = 4
	dcs = 4 buffer = "TextC12"		Text = "TextC"
	offset = 0		
	length = 5		DIODI AVITEVE D
11	Successful call, buffer is part of a buffer Send the command		DISPLAY TEXT Proactive command
	initDisplayText()		Command
	qualifier = 0 dcs = 4		qualifier = 00h
	dcs = 4 buffer = "12TextD34"		dcs = 4 Text = "TextD"
	offset = 2		
12	length = 5 Successful call, qualifier = 81h		DISPLAY TEXT Proactive
	Send the command		command
	<pre>initDisplayText() qualifier = 81h</pre>		mualifier 01h
	dcs = 4		qualifier = 81h dcs = 4
	buffer = "TextE"		Text = "TextE"
	offset = 0 length = 5		
13	Successful call, DCS=0 (7 bits)		DISPLAY TEXT Proactive
	Send the command initDisplayText()		command
	qualifier = 0		qualifier = 00h
	dcs = 0		dcs = 0
	<pre>buffer = "TextF" offset = 0</pre>		Text = "TextF"
	length = 5		

ld	Description	API Expectation	APDU Expectation
14	Successful call, DCS=8 (UCS2)		DISPLAY TEXT Proactive
	Send the command		command
	initDisplayText()		
	qualifier = 0 dcs = 8		qualifier = 00h dcs = 8
	buffer = "TextG"		Text = "TextG"
	offset = 0		
	length = 5		
15	Call the initDisplayText() method with any		DISPLAY TEXT Proactive
	value		command
	Then build and send a DISPLAY TEXT		qualifier = 00h
	command qualifier = 0		dcs = 4
	dcs = 4		Text = "TextHTextH"
	buffer = "TextHTextH"		
	offset = 0		
	length = 10		
16	Successful call, text length is zero		DISPLAY TEXT Proactive
	Send the command initDisplayText()		command
	qualifier = 0		qualifier = 00h
	dcs = 4		Text String TLV = 8D 00
	buffer = "TextHTextH"		
	offset = 0		
17	length = 0 Select a TLV in the ProactiveHandler		
17	Call the initDisplayText() method	UNAVAILABLE_ELEMENT ToolkitException is thrown by	
	Call the getValueLength() method	getValueLength()	
	oun the get value congun() method	get value Length()	
18	Successful call, buffer length = 7Eh		DISPLAY TEXT Proactive
	initDisplayText()		command
	qualifier = 0 dcs = 4		
	buffer = "UUU"		Text String TLV = 8D 7F 04 55 55
	offset = 0		05 71 04 33 33
	length = 7Eh		
19	Successful call, buffer length = 7Fh		DISPLAY TEXT Proactive
	<pre>initDisplayText() qualifier = 0</pre>		command
	dcs = 4		Text String TLV = 8D 81
	buffer = "UUU"		80 04 55 55
	offset = 0		
20	length = 7Fh		DICDLAY TEXT December 2
20	Successful call, buffer length = 240 initDisplayText()		DISPLAY TEXT Proactive
	Qualifier = 0		command
	dcs = 4		Text String TLV =
	buffer = "UUU"		8D 81 F1 04 55 55
	offset = 0		
21	length = 240 Call the initDisplayText() method with a too	HANDLER_OVERFLOW	
'	long buffer	ToolkitException is thrown	
	qualifier = 0	- Commence of the tribution	
	dcs = 4		
	buffer = "XXXX"		
	offset = 0 length = 241		
22	Call the initDisplayText() without sending the		No proactive command shall
	command		be sent expected status is
			'9000'
L		1	

5.2.4.3 Method initGetInkey

Test Area Reference: Api_2_Pah_Ingk.

5.2.4.3.1 Conformance requirement

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

5.2.4.3.1.1 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 initializes 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.
- CRRN6: If length is equal to zero, then the Text String TLV inserted in the command is a null text string TLV as defined in ETSI TS 101 267 [11].

5.2.4.3.1.2 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.

5.2.4.3.1.3 Context errors

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

5.2.4.3.2 Test area files

Test Source: Test_Api_2_Pah_Ingk.java.

Test Applet: Api_2_Pah_Ingk_1.java.

Cap File: api_2_pah_ingk.cap.

5.2.4.3.3 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
N6	16
P1	1
P2	2, 3, 4, 5, 6
C1	21

5.2.4.3.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	NULL as parameter to buffer	NullPointerException is thrown	
	<pre>initGetInkey()</pre>	·	
	buffer = NULL		
2	offset > buffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>initGetInkey() buffer = "Text"</pre>	n is thrown	
	offset = 5		
3	offset < 0	ArrayIndexOutOfBoundsExceptio	
"	initGetInkey()	n is thrown	
	buffer = "Text"	in io unowii	
	offset = -1		
4	length > buffer.length	ArrayIndexOutOfBoundsExceptio	
	initGetInkey()	n is thrown	
	buffer = "Text"		
	offset = 0 length = 5		
5	offset + length > buffer.length	ArrayIndexOutOfBoundsExceptio	
3	initGetInkey()	n is thrown	
	buffer = "Text"	II IS UIIOWII	
	offset = 3		
	length = 2		
6	length < 0	ArrayIndexOutOfBoundsExceptio	
	initGetInkey()	n is thrown	
	<pre>buffer = "Text" offset = 3</pre>		
	length = -1		
7	Successful call, buffer is the whole buffer	No exception is thrown	
′	initGetInkey()	No exception is thrown	
	qualifier = 0		
	dcs = 4		
	buffer = "TextA"		
	offset = 0		
	length = 5 Verify the command number value	Command number between 01h	
	verify the command number value	and FEh	
8	Send the command		GET INKEY Proactive
			command
			qualifier = 00h
			dcs = 4 Text = "TextA"
9	Successful call, buffer is part of a buffer with		GET INKEY Proactive
"	the end part		command
	<pre>initGetInkey()</pre>		Command
	qualifier = 0		qualifier = 00h
	dcs = 4		dcs = 4
	buffer = "12TextB"		Text = "TextB"
	offset = 2 length = 5		
10	Successful call, buffer is part of a buffer with		GET INKEY Proactive
'0	the first part		command
	initGetInkey()		
	qualifier = 0		qualifier = 00h
	dcs = 4		dcs = 4
	buffer = "TextC12"		Text = "TextC"
	offset = 0 length = 5		
11	Successful call, buffer is part of a buffer		GET INKEY Proactive
' '	Send the command		command
	initGetInkey()		
	qualifier = 0		qualifier = 00h
	dcs = 4		dcs = 4
	buffer = "12TextD34"		Text = "TextD"
	offset = 2		
	length = 5	<u> </u>	

ld	Description	API Expectation	APDU Expectation
12	Successful call, qualifier = 81h	AFIEXPECTATION	GET INKEY Proactive
12	initGetInkey()		command
	qualifier = 81h		Command
	dcs = 4		qualifier = 81h
	<pre>buffer = "TextE"</pre>		dcs = 4
	offset = 0		Text = "TextE"
	length = 5		
13	Successful call, DCS=0 (7 bits)		GET INKEY Proactive
	initGetInkey()		command
	qualifier = 0 dcs = 0		
	buffer = "TextF"		qualifier = 00h dcs = 0
	offset = 0		Text = "TextF"
	length = 5		
14	Successful call, DCS=8 (UCS2)		GET INKEY Proactive
	<pre>initGetInkey()</pre>		command
	qualifier = 0		
	dcs = 8		qualifier = 00h
	<pre>buffer = "TextG" offset = 0</pre>		dcs = 8
	length = 5		Text = "TextG"
15	Call the initGetInkey() method with any value		GET INKEY Proactive
13	Then build and send a GET INKEY command		command
	qualifier = 0		
	dcs = 4		qualifier = 00h
	buffer = "TextHTextH"		dcs = 4
	offset = 0		Text = "TextHTextH"
16	length = 10 Successful call, text length is zero		GET INKEY Proactive
16	Send the command		command
	initGetInkey()		Command
	qualifier = 0		qualifier = 00h
	dcs = 4		Text String TLV = 8D 00
	buffer = "TextHTextH"		
	offset = 0		
17	length = 0 Select a TLV in the ProactiveHandler	UNAVAILABLE_ELEMENT	
17	Call the initGetInkey() method	ToolkitException is thrown by	
	Call the getValueLength() method	getValueLength()	
	Gail and gottaladeongaily moulea	gotvaraozorigan()	
18	Successful call, buffer length = 7Eh		GET INKEY Proactive
	<pre>initGetInkey()</pre>		command
	qualifier = 0		
	dcs = 4		Text String TLV =
	<pre>buffer = "UUU" offset = 0</pre>		8D 7F 04 55 55
	length = 7Eh		
19	Successful call, buffer length = 7Fh		GET INKEY Proactive
	<pre>initGetInkey()</pre>		command
	qualifier = 0		
	dcs = 4 buffer = "UUU"		Text String TLV = 8D 81
	offset = 0		80 04 55 55
	length = 7Fh		
20	Successful call, buffer length = 240		GET INKEY Proactive
	<pre>initGetInkey()</pre>		command
	Qualifier = 0		
	dcs = 4 buffer = "UUU"		Text String TLV =
	offset = 0		8D 81 F1 04 55 55
	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 shall
	command		be sent expected status is
1			'9000'

5.2.4.4 Method initGetInput

Test Area Reference: Api_2_Pah_Ingp.

5.2.4.4.1 Conformance requirement

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

5.2.4.4.1.1 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 initializes 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.
- CRRN6: If length is equal to zero, then the Text String TLV inserted in the command is a null text string TLV as defined in ETSI TS 101 267 [11].

5.2.4.4.1.2 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.

5.2.4.4.1.3 Context errors

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

5.2.4.4.2 Test area files

Test Source: Test_Api_2_Pah_Ingp.java.

Test Applet: Api_2_Pah_Ingp_1.java.

Cap File: api_2_pah_ingp.cap.

5.2.4.4.3 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
N6	16
P1	1

CRR number	Test case number
P2	2, 3, 4, 5, 6
C1	21

5.2.4.4.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	NULL as parameter to buffer	NullPointerException is thrown	-
	initGetInput()		
	buffer = NULL	A was the day Out Of Day and a Type anti-	
2	<pre>offset > buffer.length initGetInkey()</pre>	ArrayIndexOutOfBoundsException is thrown	
	buffer = "Text"	II IS UIIOWII	
	offset = 5		
3	offset < 0	ArrayIndexOutOfBoundsExceptio	
	initGetInkey()	n is thrown	
	<pre>buffer = "Text" offset = -1</pre>		
4	length > buffer.length	ArrayIndexOutOfBoundsExceptio	
-	initGetInkey()	n is thrown	
	buffer = "Text"		
	offset = 0		
_	length = 5	A was the day Out Of Day and a Type anti-	
5	<pre>offset + length > buffer.length initGetInkey()</pre>	ArrayIndexOutOfBoundsException is thrown	
	buffer = "Text"	n is thrown	
	offset = 3		
	length = 2		
6	length < 0	ArrayIndexOutOfBoundsExceptio	
	<pre>initGetInkey() buffer = "Text"</pre>	n is thrown	
	offset = 3		
	length = -1		
7	Successful call, buffer is the whole buffer	No exception is thrown	
	<pre>initGetInkey()</pre>		
	qualifier = 0		
	dcs = 4		
	buffer = "TextA"		
	offset = 0 length = 5		
	minRespLength = 00h		
	maxRespLength = FFh		
	Verify the command number value	Command number between 01h	
ļ		and FEh	
8	Send the command		GET INPUT Proactive
			command
			qualifier = 00h
			dcs = 4
			Text = "TextA"
			Min Length = 00h
9	Successful call, buffer is part of a buffer with		Max Length = FFh GET INPUT Proactive
٦	the end part		command
	Send the command		
	initGetInkey()		qualifier = 00h
	qualifier = 0		dcs = 4
	dcs = 4		Text = "TextB" Min Length = 10h
	<pre>buffer = "12TextB" offset = 2</pre>		Max Length = 10h
	length = 5		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	minRespLength = 10h		
	maxRespLength = FFh		

ld	Description	API Expectation	APDU Expectation
10	Successful call, buffer is part of a buffer with		GET INPUT Proactive
	the first part		command
	Send the command		004
	<pre>initGetInkey() qualifier = 0</pre>		qualifier = 00h dcs = 4
	dcs = 4		Text = "TextC"
	buffer = "TextC12"		Min Length = FFh
	offset = 0		Max Length = FFh
	length = 5		
	minRespLength = FFh maxRespLength = FFh		
11	Successful call, buffer is part of a buffer		GET INPUT Proactive
	Send the command		command
	<pre>initGetInkey()</pre>		
	qualifier = 0 dcs = 4		qualifier = 00h dcs = 4
	buffer = "12TextD34"		Text = "TextD"
	offset = 2		Min Length = 00h
	length = 5		Max Length = 00h
	minRespLength = 00h		
12	maxRespLength = 00h Successful call, qualifier = 81h		GET INPUT Proactive
'-	initGetInkey()		command
	qualifier = 81h		
	dcs = 4		qualifier = 81h
	<pre>buffer = "TextE" offset = 0</pre>		dcs = 4
	length = 5		Text = "TextE" Min Length = 00h
	minRespLength = 00h		Max Length = 10h
	maxRespLength = 10h		_
13	Successful call, DCS=0 (7 bits)		GET INPUT Proactive
	initGetInkey()		command
	qualifier = 0 dcs = 0		qualifier = 00h
	buffer = "TextF"		dcs = 0
	offset = 0		Text = "TextF"
	length = 5		Min Length = 10h
	minRespLength = 10h maxRespLength = 10h		Max Length = 10h
14	Successful call, DCS=8 (UCS2)		GET INPUT Proactive
	<pre>initGetInkey()</pre>		command
	qualifier = 0		
	<pre>dcs = 8 buffer = "TextG"</pre>		qualifier = 00h dcs = 8
	offset = 0		Text = "TextG"
	length = 5		Min Length = 00h
	minRespLength = 00h		Max Length = FFh
1-	maxRespLength = FFh		OFT WIRLIAM (
15	Call the initGetInput() method with any value Then build and send a GET INPUT command		GET INPUT Proactive
	qualifier = 0		command
	dcs = 4		qualifier = 00h
	<pre>buffer = "TextHTextH"</pre>		dcs = 4
	offset = 0		Text = "TextHTextH"
	<pre>length = 10 minRespLength = 00h</pre>		Min Length = 00h Max Length = 10h
	maxRespLength = 10h		
16	Successful call, text length is zero		GET INPUT Proactive
	Send the command		command
	<pre>initGetInkey() qualifier = 0</pre>		qualifier = 00h
	dcs = 4		Text String TLV = 8D 00
	buffer = "TextHTextH"		Min Length = 00h
	offset = 0		Max Length = 10h
	<pre>length = 0 minRespLength = 00h</pre>		
	maxRespLength = 10h		
17	Select a TLV in the ProactiveHandler	UNAVAILABLE_ELEMENT	
	Call the initGetInput() method	ToolkitException is thrown by	
	Call the getValueLength() method	getValueLength()	

ld	Description	API Expectation	APDU Expectation
18	Successful call, buffer length = 7Eh		GET INPUT Proactive
	<pre>initGetInkey()qualifier = 0</pre>		command
	dcs = 4		
	buffer = "UUU"		Text String TLV =
	offset = 0		8D 7F 04 55 55
	length = 7Eh		Min Length = 00h
	minRespLength = 00h		Max Length = 10h
4.0	maxRespLength = 10h		OFT INDUIT D
19	Successful call, buffer length = 7Fh		GET INPUT Proactive
	initGetInkey()		command
	qualifier = 0 dcs = 4		
	buffer = "UUU"		Text String TLV = 8D 81
	offset = 0		80 04 55 55
	length = 7Fh		Min Length = 00h Max Length = 10h
	minRespLength = 00h		Max Hength = 1011
	maxRespLength = 10h		
20	Successful call, buffer length = 236		GET INPUT Proactive
	initGetInkey()		command
	Qualifier = 0		
	dcs = 4		Text String TLV =
	buffer = "UUU"		8D 81 ED 04 55 55
	offset = 0		
	length = 236		
	minRespLength = 00h		
	maxRespLength = 10h		
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 shall
	command		be sent expected status is
	- Communa		'9000'
			3000

5.2.4.5 Method send

Test Area Reference: Api_2_Pah_Send.

5.2.4.5.1 Conformance requirement

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

public byte send()

5.2.4.5.1.1 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.

5.2.4.5.1.2 Parameter errors

No requirements.

5.2.4.5.1.3 Context errors

- CRRC1: A ToolkitException.UNAVAILABLE_ELEMENT shall be thrown is the Result Comprehension 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 Comprehension TLV in Terminal Response.
- CRRC3: A ToolkitException.COMMAND_NOT_ALLOWED shall be thrown if the proactive command to be sent is not allowed by the CAT Runtime Environment.
- CRRC4: A ToolkitException.COMMAND_NOT_ALLOWED shall be thrown if one parameter of the proactive command to be sent is not allowed by the CAT Runtime Environment.

5.2.4.5.2 Test area files

Test Source: Test_Api_2_Pah_Send.java.

Test Applet: Api_2_Pah_Send_1.java.

Cap File: api_2_pah_send.cap.

5.2.4.5.3 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	checked in the CAT Runtime Environment test : Cre_Api_Tran (test case 1)
C1	15
C2	16
C3	checked in the CAT Runtime Environment test: Fwk_Pcs_Pcco (test case 1)
C4	checked in the CAT Runtime Environment test: Fwk_Pcs_Pcco (test cases 2 to 3)

5.2.4.5.4 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'		
4	Terminal Response with General Result = 01,	Result of send() is 01h	
	without Additional information on result		
	Result TLV = 03 01 01 (command performed		
	with partial comprehension)		
5	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
	qualifier = 00h		command
	dcs = 04h		
	buffer = 'Text'		
6	Terminal Response with General Result = 01,	Result of send() is 01h	
	with Additional information on result		
	Result TLV = 03 02 01 55 (command		
	performed with partial comprehension)		

ld	Description	API Expectation	APDU Expectation
7	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
	qualifier = 00h dcs = 04h		command
	buffer = 'Text'		
8	Terminal Response with General Result = 02	Result of send() is 02h	
	Result TLV = 03 04 02 65 43 21 (Missing information)		
9	Build and send a 7Fh byte command		DISPLAY TEXT Proactive
	(DISPLAY TEXT) qualifier = 00h		command
	dcs = 04h		BER-TLV = D0 7F
	buffer = "UUUUU" length = 73h		Text String TLV = 8D 74 04 55 55 55
10	Build and send a 80h byte command (DISPLAY TEXT)		DISPLAY TEXT Proactive command
	qualifier = 00h		DED WITH DO 01 00
	dcs = 04h buffer = "UUUUU"		BER-TLV = D0 81 80 Text String TLV = 8D 75
44	length = 74h		04 55 55 55
11	Build and send a maximum length command (length of the handler should be 253)		DISPLAY TEXT Proactive 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 Command		
	Copy ProactiveHandler to source byte array		
	Send command		
	Copy ProactiveHandler to destination byte array		
	Compare source and destination	Source and destination are identical	
13	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
	Verify there is no invocation of select() or deselect() method.		command
14	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
			command
-	Terminal Response with 2 Result TLV	Result of send() is 02h	
	•	1.10001.01.00110() 10.0211	
	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
	Terminal Response without Result	ToolkitException.UNAVAILABLE_	
	Comprehension TLV	ELEMENT is thrown by send()	
16	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
			- Communa
	Terminal Response without general result byte in the Comprehension TLV	BOUNDARIES is thrown by	
	Result TLV = 03 00	send()	
L	INCRATE INV - 03 00	1	1

5.2.4.6 Method getLength

Test Area Reference Api_2_Pah_Glen.

5.2.4.6.1 Conformance requirement

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

5.2.4.6.1.1 Normal execution

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

5.2.4.6.1.2 Parameter errors

No requirements.

5.2.4.6.1.3 Context errors

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

5.2.4.6.2 Test area files

Test Source: Test_Api_2_Pah_Glen.java

Test Applet: Api_2_Pah_Glen_1.java.

Cap File: api_2_pah_glen.cap.

5.2.4.6.3 Test coverage

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

5.2.4.6.4 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	

5.2.4.7 Method copy

Test Area Reference Api_2_Pah_Copy.

5.2.4.7.1 Conformance requirement

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

5.2.4.7.1.1 Normal execution

- CRRN1: copies the Comprehension TLV list contained in the handler to the destination byte array.
- CRRN2: returns dstOffset + dstLength.

5.2.4.7.1.2 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 Comprehension TLV List, an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException.OUT_OF_TLV_BOUNDARIES.

5.2.4.7.1.3 Context errors

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

5.2.4.7.2 Test area files

Test Source: Test_Api_2_Pah_Copy.java.

Test Applet: Api_2_Pah_Copy_1.java.

Cap File: api_2_pah_copy.cap.

5.2.4.7.3 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

5.2.4.7.4 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	
	copy()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = 6		
	dstLength = 0		

ld	Description	API Expectation	APDU Expectation
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	copy()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = -1		
	dstLength = 1		
4	DstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	copy()	n is thrown	
	<pre>dstBuffer.length = 5 dstOffset = 0</pre>		
	dstLength = 6		
5	dstOffset + dstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	copy()	In is thrown	
	dstBuffer.length = 5	III IS UIIOWII	
	dstOffset = 3		
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	copy()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = 0		
	dstLength = -1		
7	dstLength > length of the Comprehension TLV	ToolkitException.OUT_OF_TLV_	
	list	BOUNDARIES is thrown	
	copy()		
	<pre>dstBuffer.length = 10 dstOffset = 0</pre>		
	dstLength = 10		
8		Result of copy() is 9	
0	copy ()	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	
	copy()		
	dstBuffer.length = 15		
	dstOffset = 3		
44	dstLength = 9	D	
11	Compare the whole buffer	Result of arrayCompare() is 0	
12	Successful call, dstBuffer is part of a buffer	Result of copy() is 9	
	<pre>copy() dstBuffer.length = 15</pre>		
	dstOffset = 3		
	dstLength = 6		
13	Compare the whole buffer	Result of arrayCompare() is 0	
10		incodit of anayouthpare() is 0	

5.2.4.8 Method findTLV

Test Area Reference Api_2_Pah_Find.

5.2.4.8.1 Conformance requirement

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

5.2.4.8.1.1 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.

5.2.4.8.1.2 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.

5.2.4.8.1.3 Context errors

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

5.2.4.8.2 Test area files

Test Source: Test_Api_2_Pah_Find.java.

Test Applet: Api_2_Pah_Find_1.java.

Cap File: api_2_pah_find.cap.

5.2.4.8.4 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

5.2.4.8.3 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialize the handler		
	Invalid input parameter	ToolkitException.BAD_INPUT_PA	
	findTLV()	RAMETER is thrown	
	Occurrence = 0		
2	Call the init() method		
	Search 1st TLV	Result is TLV_FOUND_CR_SET	
	findTLV()		
	Tag = 01h		
	Occurrence = 1		
3	Call the getValueLength() method	Result is 03h	
4	Search 2nd TLV	Result is TLV_FOUND_CR_SET	
	findTLV()		
	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	
	findTLV()		
	Tag = 03h		
	Occurrence = 1		
7	Call the getValueLength() method	ToolkitException.UNAVAILABLE_ ELEMENT is thrown.	

ld	Description	API Expectation	APDU Expectation
8	Search a tag with wrong occurrence	Result is TLV_NOT_FOUND	
	findTLV()		
	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	
	findTLV()	TLV_FOUND_CR_NOT_SET	
	Tag = 02h		
	Occurrence = 2		
11	Append a TLV with tag=04h		
	Search the TLV	Result is	
	findTLV()	TLV_FOUND_CR_NOT_SET	
	Tag = 04h		
	Occurrence = 1		
12	Search tag 81h	Result is TLV_FOUND_CR_SET	
	findTLV()		
	Tag = 81h		
	Occurrence = 1		
13	Search tag 84h	Result is	
	findTLV()	TLV_FOUND_CR_NOT_SET	
	Tag = 84h		
	Occurrence = 1		

5.2.4.9 Method getValueLength

Test Area Reference Api_2_Pah_Gvle.

5.2.4.9.1 Conformance requirement

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

5.2.4.9.1.1 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.

5.2.4.9.1.2 Parameter errors

No requirements.

5.2.4.9.1.3 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.

5.2.4.9.2 Test area files

Test Source: Test_Api_2_Pah_Gvle.java.

Test Applet: Api_2_Pah_Gvle_1.java.

Cap File: api_2_pah_gvle.cap.

5.2.4.9.3 Test coverage

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

5.2.4.9.4 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		
	valueOffset = 0		
	valueLength = 0		
	Search TLV 0Dh (Text String TLV)		
	getValueLength()	Result is 00h	
3	Call the initDisplayText() method		
	length = 1 (+ dcs byte)		
	Search TLV 0Dh (Text String TLV)		
	getValueLength()	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)		
	getValueLength()	Result is 80h	
6	Call the initDisplayText() method		
	length = F0h (maximum text length)		
	Search TLV 0Dh (Text String TLV)		
	getValueLength()	Result is F1h	

5.2.4.10 Method getValueByte

 $Test\ Area\ Reference\ Api_2_Pah_Gvby.$

5.2.4.10.1 Conformance requirement

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

5.2.4.10.1.1 Normal execution

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

5.2.4.10.1.2 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.

5.2.4.10.1.3 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.

5.2.4.10.2 Test area files

Test Source: Test_Api_2_Pah_Gvby.java.

Test Applet: Api_2_Pah_Gvby_1.java.

Cap File: api_2_pah_gvby.cap.

5.2.4.10.3 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

5.2.4.10.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call the init() method	•	•
	type = FFh		
	qualifier = FEh		
	destination = FDh	T HEE C LINIANAM ADEC	
	getValueByte(0)	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 FEh (qualifier)	
4	Search TLV 02h (Device Identities TLV)		
	getValueByte(0)	Result is 81h (Source)	
5	<pre>initDisplayText() buffer = 00 01 7D length = 7Eh Search TLV 0Dh (Text String TLV)</pre>		
	getValueByte(7E)	Result is 7Dh	
6	<pre>initDisplayText() buffer = 00 01 7D 7E length = 7Fh Search TLV 0Dh (Text String TLV)</pre>		
	getValueByte(7E)	Result is 7Dh	
7	getValueByte(7F)	Result is 7Eh	
8	<pre>initDisplayText() buffer = 00 01 EF length = F0h Search TLV 0Dh (Text String TLV)</pre>		
	getValueByte(F0)	Result is EFh	

5.2.4.11 Method copyValue

Test Area Reference Api_2_Pah_Cpyv

5.2.4.11.1 Conformance requirement

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

5.2.4.11.1.1 Normal execution

- CRRN1: copies a part of the last TLV element which has been found, into a destination. buffer.
- CRRN2: returns dstOffset + dstLength.

5.2.4.11.1.2 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 is negative or valueOffset + dstLength > current TLV length, an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException.OUT_OF_TLV_BOUNDARIES.

5.2.4.11.1.3 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.

5.2.4.11.2 Test area files

Test Source: Test_Api_2_Pah_Cpyv.java.

Test Applet: Api_2_Pah_Cpyv_1.java.

Cap File: api_2_pah_cpyv.cap.

5.2.4.11.3 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	

5.2.4.11.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialize the handler		•
'	Select a TLV		
	copyValue() with a null dstBuffer	NullPointerException is thrown	
	oop, varas (, wrom a marr abobarror	Num office Exception is thrown	
2	initDisplayText() with length = 15		
-	Select Text String TLV		
	dstOffset > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	copyValue()	n is thrown	
	dstBuffer.length = 5	11 10 11 11 11 11	
	dstOffset = 6		
	dstLength = 0		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	copyValue()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = -1		
<u> </u>	dstLength = 1	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
4	dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	copyValue()	n is thrown	
	dstBuffer.length = 5		
	<pre>dstOffset = 0 dstLength = 6</pre>		
5	dstDefigen = 6 dstOffset + dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
ာ	copyValue()		
	dstBuffer.length = 5	n is thrown	
	dstOffset = 3		
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	copyValue()	n is thrown	
	dstBuffer.length = 5	ii lo ullowii	
	dstOffset = 0		
	dstLength = -1		
7	initDisplayText() with length = 5		
	Select Text String TLV		
	valueOffset > Text String Length	ToolkitException.OUT_OF_TLV_	
	copyValue()	BOUNDARIES is thrown	
	<pre>valueOffset = 7</pre>		
	dstBuffer.length = 15		
	dstOffset = 0		
<u> </u>	dstLength = 0	T "" OUT OF TIVE	
8	[Select Text String TLV]	ToolkitException.OUT_OF_TLV_	
	valueOffset < 0	BOUNDARIES is thrown	
	<pre>copyValue() valueOffset = -1</pre>		
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 1		
9	[Select Text String TLV]	ToolkitException.OUT_OF_TLV_	
	dstLength > Text String length	BOUNDARIES is thrown	
	copyValue()		
	valueOffset = 0		
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 7		
10	[Select Text String TLV]	ToolkitException.OUT_OF_TLV_	
	valueOffset + dstLength > Text String	BOUNDARIES is thrown	
1	length		
	copyValue()		
	valueOffset = 2		
	dstBuffer.length = 15		
	dstOffset = 0		
1.4	dstLength = 5		
11	Initialize the handler	THATC HAIAYAY ABLE	
	copyValue()	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown	
		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·

ld	Description	API Expectation	APDU Expectation
12	initDisplayText()		
	dcs = 4		
	buffer = 00 01 0F		
	Select Text String TLV		
	Successful call	Result of copyValue() is 17	
	copyValue()		
	valueOffset = 0		
	dstBuffer.length = 17		
	dstOffset = 0		
	dstLength = 17		
13	Compare buffer	Result is 00h	
	buffer = 04 00 01 0F		
14	Initialize dstBuffer		
	dstBuffer = 55 55 55		
	Successful call	Result of copyValue() is 15	
	copyValue()		
	valueOffset = 2		
	dstBuffer.length = 20		
	dstOffset = 3		
<u></u>	dstLength = 12	5 1:1 221	
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		

5.2.4.12 Method compareValue

Test Area Reference Api_2_Pah_Cprv.

5.2.4.12.1 Conformance requirement

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

5.2.4.12.1.1 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 Comprehension TLV List is less than that in compareBuffer.
- CRRN3: returns 1 if the first miscomparing byte in Comprehension TLV List is greater than that in compareBuffer.

5.2.4.12.1.2 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 is negative or valueOffset + dstLength > current TLV length, an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException.OUT_OF_TLV_BOUNDARIES.

5.2.4.12.1.3 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.

5.2.4.12.2 Test area files

Test Source: Test_Api_2_Pah_Cprv.java.

Test Applet: Api_2_Pah_Cprv_1.java.

Cap File: api_2_pah_cprv.cap.

5.2.4.12.3 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

5.2.4.12.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialize the handler	•	
	Select a TLV		
	compareValue() with a null compareBuffer	NullPointerException is thrown	
2	initDisplayText() with length = 15		
	Select Text String TLV		
	compareOffset > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	compareValue()	n is thrown	
	compareBuffer.length = 5		
	compareOffset = 6		
<u> </u>	compareLength = 0	1 1 0 10/0	
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
	compareValue()	n is thrown	
	<pre>compareBuffer.length = 5 compareOffset = -1</pre>		
	compareUniset = -1 compareLength = 1		
4	compareLength >compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
_	compareValue()	n is thrown	
	compareBuffer.length = 5	II IS UIIOWII	
	compareOffset = 0		
	compareLength = 6		
5	compareOffset + compareLength	ArrayIndexOutOfBoundsExceptio	
	>compareBuffer.length	n is thrown	
	compareValue()		
	compareBuffer.length = 5		
	compareOffset = 3		
	compareLength = 3		
6	compareLength < 0	ArrayIndexOutOfBoundsExceptio	
	compareValue()	n is thrown	
	compareBuffer.length = 5		
	compareOffset = 0		
	compareLength = -1		

ld	Description	API Expectation	APDU Expectation
7	initDisplayText() with length = 5	AirExpectation	Ai Do Expectation
'	Select Text String TLV		
	valueOffset > Text String Length	ToolkitException.OUT_OF_TLV_	
	compareValue()	BOUNDARIES is thrown	
	valueOffset = 7		
	<pre>compareBuffer.length = 15 compareOffset = 0</pre>		
	compareLength = 0		
8	[Select Text String TLV]	ToolkitException.OUT_OF_TLV_	
	valueOffset < 0	BOUNDARIES is thrown	
	<pre>compareValue() valueOffset = -1</pre>		
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 1		
9	[Select Text String TLV]	ToolkitException.OUT_OF_TLV_	
	compareLength > Text String length compareValue()	BOUNDARIES is thrown	
	valueOffset = 0		
	compareBuffer.length = 15		
	compareOffset = 0		
10	compareLength = 7 [Select Text String TLV]	ToolkitException.OUT_OF_TLV_	
10	valueOffset + compareLength > Text String	BOUNDARIES is thrown	
	length	BOONDAINES IS UIIOWII	
	compareValue()		
	<pre>valueOffset = 2 compareBuffer.length = 15</pre>		
	compareOffset = 0		
	compareLength = 5		
11	Initialize the handler		
	compareValue()	ToolkitException.UNAVAILABLE_ ELEMENT is thrown	
12	initDisplayText()		
	dcs = 4		
	<pre>buffer = 00 01 0F Select Text String TLV</pre>		
	Initialize compareBuffer		
	compareBuffer =		
	04 00 01 0F		
	Compare buffers	Result is 00h	
	<pre>compareValue() valueOffset = 0</pre>		
	compareOffset = 0		
	compareLength = 17		
40	luitialian annuana Doffen		
13	Initialize 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	
	25pa. 2 aaoro mini samo paramotoro		
14	Initialize compareBuffer		
	compareBuffer =		
	03 00 01 0F Compare buffers with same parameters	Result is +1	
	Compare buriers with same parameters	INCOURT IS TI	
15	Initialize 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	
	compareValue()		
	<pre>valueOffset = 2 compareOffset = 3</pre>		
	compareLength = 12		

ld	Description	API Expectation	APDU Expectation
16	Initialize 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	Initialize 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	
18	Initialize compareBuffer		
	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	

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

Test Area Reference Api_2_Pah_Facyb_Bs.

5.2.4.13.1 Conformance requirement

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

5.2.4.13.1.1 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.

5.2.4.13.1.2 Parameter errors

- CRRP1: if dstBuffer is null NullPointerException shall be thrown.
- CRRP2: if dstOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

5.2.4.13.1.3 Context errors

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

5.2.4.13.2 Test area files

Test Source: Test_Api_2_Pah_Facyb_Bs.java.

Test Applet: Api_2_Pah_Facyb_Bs_1.java.

Cap File: api_2_pah_facyb_bs.cap.

5.2.4.13.3 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

5.2.4.13.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialize the handler	-	-
	FindAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	InitDisplayText() with length = 15		
	<pre>dstOffset > dstBuffer.length findAndCopyValue() tag = 0Dh dstBuffer.length = 20 dstOffset = 21</pre>	ArrayIndexOutOfBoundsException is thrown	
3	<pre>dstOffset < 0 findAndCopyValue() dstBuffer.length = 20 dstOffset = -1</pre>	ArrayIndexOutOfBoundsException is thrown	
4	<pre>length > dstBuffer.length findAndCopyValue() dstBuffer.length = 15 dstOffset = 0</pre>	ArrayIndexOutOfBoundsException is thrown	
5	DstOffset + length >dstBuffer.length findAndCopyValue() DstBuffer.length = 20 DstOffset = 5	ArrayIndexOutOfBoundsException is thrown	
6	initDisplayText()		
	Select a TLV (tag 02h)		
	findAndCopyValue() tag = 03h	ToolkitException.UNAVAILABLE_ ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE_ ELEMENT is thrown.	
7	<pre>initDisplayText() dcs = 4 buffer = 00 01 0F</pre>		
	Successful call findAndCopyValue() Tag = 0Dh DstBuffer.length = 17 DstOffset = 0	Result of findAndcopyValue() is 17	
8	Compare buffer buffer = 04 00 01 0F	Result is 00h	
9	Initialize dstBuffer dstBuffer = 55 55 55		
	Successful call findAndCopyValue() dstBuffer.length = 20 dstOffset = 2	Result of findAndcopyValue() is 19	

ld	Description	API Expectation	APDU Expectation
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 33		
11	initDisplayText()		
	dcs = 4		
	buffer = 00 01 0F		
	append a 2nd Text String TLV		
	Successful call	Result of findAndcopyValue() is	
	findAndCopyValue()	17	
	tag = 0Dh		
	<pre>dstBuffer.length = 17 dstOffset = 0</pre>		
12	Compare buffer	Result is 00h	
12	buffer = 04 00 01 0F	Result is odii	
13	initDisplayText()		
	dcs = 4		
	buffer = 00 01 0F		
	Successful call (with tag 8Dh)	Result of findAndcopyValue() is	
	findAndCopyValue()	17	
	tag = 8Dh		
	<pre>dstBuffer.length = 17 dstOffset = 0</pre>		
14	Compare buffer	Result is 00h	
14	buffer = 04 00 01 0F	ivesuit is oon	
	Baller - 01 00 01 01		
15	Append tag 0Fh		
	buffer = 00 01 0F		
	Successful call (with tag 8Fh)	Result of findAndcopyValue() is	
	findAndCopyValue()	16	
	tag = 8Fh		
	<pre>dstBuffer.length = 16 dstOffset = 0</pre>		
16	Compare buffer	Result is 00h	
10	buffer = 00 01 0F	Tresult is our	
			1

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

Test Area Reference Api_2_Pah_Facybbs_Bss.

5.2.4.14.1 Conformance requirement

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

5.2.4.14.1.1 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.

5.2.4.14.1.2 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 is negative or valueOffset + dstLength > current TLV length, 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.

5.2.4.14.1.3 Context errors

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

5.2.4.14.2 Test area files

Test Source: Test_Api_2_Pah_Facybbs_Bss.java.

Test Applet: Api_2_Pah_Facybbs_Bss_1.java.

Cap File: api_2_pah_facybbs_bss.cap.

5.2.4.14.3 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
P4	24
C1	Does not apply for ProactiveHandler

5.2.4.14.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialize the handler		
	findAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	initDisplayText() with length = 15		
	dstOffset > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	tag = 0Dh, occurrence = 1		
	<pre>valueOffset = 0</pre>		
	dstBuffer.length = 5		
	dstOffset = 6		
	dstLength = 0		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = -1		
	dstLength = 1		

ld	Description	API Expectation	APDU Expectation
			AFDO Expectation
4	dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	dstBuffer.length = 5		
	<pre>dstOffset = 0 dstLength = 6</pre>		
		ArrayladayOutOfDays do Eyeanti-	
5	dstOffset + dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	<pre>dstBuffer.length = 5 dstOffset = 3</pre>		
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
0	findAndCopyValue()	n is thrown	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 0		
	dstLength = -1		
7	initDisplayText() with length = 5		
<u> </u>	valueOffset > Text String Length	ToolkitException.OUT_OF_TLV_	
	findAndCopyValue()	BOUNDARIES is thrown	
1	tag = 0Dh, occurrence = 1	POOLADVIVIES IS ILLIOMII	
1	valueOffset = 7		
	dstBuffer.length = 15		
1	dstOffset = 0		
	dstLength = 0	<u> </u>	
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	findAndCopyValue()	BOUNDARIES is thrown	
1	valueOffset = -1		
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 1		
9	dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
	findAndCopyValue()	BOUNDARIES is thrown	
	valueOffset = 0		
1	dstBuffer.length = 15		
	<pre>dstOffset = 0 dstLength = 7</pre>		
10	valueOffset + dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
10	findAndCopyValue()	BOUNDARIES is thrown	
	valueOffset = 2	DOUNDAKIES IS INTOWN	
	dstBuffer.length = 15		
1	dstOffset = 0		
	dstLength = 5		
11	InitDisplayText()		
	Select a TLV (tag 02h)		
	findAndCopyValue()	ToolkitException.UNAVAILABLE_	
	tag = 0Dh	ELEMENT is thrown	
	occurrence = 2	LLEWEITT IO UNOWIT	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
	J J,	ELEMENT is thrown.	
12	initDisplayText()		
	dcs = 4		
	buffer = 00 01 0F		
	Successful call	Result of findAndCopyValue() is	
	findAndCopyValue()	17	
1	tag = 0Dh, occurrence = 1		
	valueOffset = 0		
	dstBuffer.length = 17		
1	dstOffset = 0		
1.5	dstLength = 17	B III and	
13	Compare buffer	Result is 00h	
	buffer = 04 00 01 0F		
<u> </u>			
14	Initialize dstBuffer		
	dstBuffer = 55 55 55		
	Successful call	Result of findAndcopyValue() is	
	findAndCopyValue()	15	
	tag = 0Dh, occurrence = 1		
	valueOffset = 2		
	dstBuffer.length = 20		
	<pre>dstOffset = 3 dstLength = 12</pre>		
1	apendingen = 12	I I	

ld	Description	API Expectation	APDU Expectation
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		
	DCS byte)		
	Successful call findAndCopyValue()	Result of findAndCopyValue() is	
	tag = 0Dh, occurrence = 1	17	
	valueOffset = 0		
	dstBuffer.length = 17		
	dstOffset = 0		
47	dstLength = 17	D - 00 -	
17	Compare buffer buffer = 04 00 01 0F	Result is 00h	
	Durrer = 04 00 01 0r		
18	Successful call	Result of findAndCopyValue() is 6	
'	findAndCopyValue()	researce initial indeepy value() is o	
	tag = 0Dh, occurrence = 2		
	valueOffset = 0		
	<pre>dstBuffer.length = 6 dstOffset = 0</pre>		
	dstLength = 6		
19	Compare buffer	Result is 00h	
. •	buffer = 00 11 22 33 44 55		
20	initDisplayText()		
	dcs = 4 buffer = 00 01 0F		
	Successful call (with tag 8Dh)	Result of findAndcopyValue() is	
	findAndCopyValue()	17	
	tag = 8Dh		
	occurrence = 1		
	<pre>valueOffset = 0 dstBuffer.length = 17</pre>		
	dstOffset = 0		
	dstLength = 17		
21	Compare buffer	Result is 00h	
	buffer = 04 00 01 0F		
	A		
22	Append tag 0Fh buffer = 00 01 0F		
	Successful call (with tag 8Fh)	Result of findAndcopyValue() is	
	findAndCopyValue()	16	
	tag = 8Fh		
	occurrence = 1		
	valueOffset = 0		
	<pre>dstBuffer.length = 16 dstOffset = 0</pre>		
	dstLength = 16		
23	Compare buffer	Result is 00h	
	buffer = 00 01 0F		
<u> </u>			
24	Invalid parameter	ToolkitException.BAD_INPUT_PA	
	<pre>findAndCopyValue() occurrence = 0</pre>	RAMETER is thrown	
1	00041101100 - 0		

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

Test Area Reference Api_2_Pah_Facrb_Bs.

5.2.4.15.1 Conformance requirement

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

5.2.4.15.1.1 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 Comprehension TLV is less than that in compareBuffer returns -1.
- CRRN5: if the first miscomparing byte in Comprehension TLV is greater than that in compareBuffer returns 1.
- CRRN6: The search method is comprehension required flag independent.

5.2.4.15.1.2 Parameter errors

- CRRP1: if compareBuffer is null NullPointerException shall be thrown.
- CRRP2: if compareOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

5.2.4.15.1.3 Context errors

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

5.2.4.15.2 Test area files

Test Source: Test_Api_2_Pah_Facrb_Bs.java.

Test Applet: Api_2_Pah_Facrb_Bs_1.java.

Cap File: api_2_pah_facrb_bs.cap.

5.2.4.15.3 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

5.2.4.15.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialize the handler	-	-
	findAndCompareValue() with a null dstBuffer	NullPointerException is thrown	
	1.10 1.1 T. (0. 11 1		
2	initDisplayText() with length = 15 compareOffset > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	In is thrown	
	tag = 0Dh		
	<pre>compareBuffer.length = 20 compareOffset = 21</pre>		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	compareBuffer.length = 20		
4	compareOffset = -1 length > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
-	findAndCompareValue()	n is thrown	
	compareBuffer.length = 15		
5	compareOffset = 0 compareOffset + length >	ArrayladayOutOfPauadaEyaantia	
5	compareOffset + length >	ArrayIndexOutOfBoundsException is thrown	
	findAndCompareValue()		
	compareBuffer.length = 20		
	<pre>compareOffset = 5</pre>		
6	InitDisplayText()		
	Select a TLV (tag 02h)		
	findAndCompareValue()	ToolkitException.UNAVAILABLE_	
	tag = 03h	ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
7	initDisplayText()	ELEMENT is thrown.	
'	dcs = 4		
	buffer = 00 01 0F		
	Initialize compareBuffer		
	compareBuffer = 04 00 01 0F		
	Compare buffers	Result is 00h	
	findAndCompareValue()		
	tag = 0Dh compareOffset = 0		
8	Verify current TLV	Result is 17	
	getValueLength()		
9	Initialize compareBuffer compareBuffer =		
	04 00 01 10		
	Compare buffers with same parameters	Result is -1	
10	Initialize compareBuffer compareBuffer =		
L	03 00 01 0F		
	Compare buffers with same parameters	Result is +1	
11	Initialize 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	
	findAndCompareValue()		
40	compareOffset = 2		
12	append a Text String TLV		
	buffer = 00 11 22 33 44 55		
	Initialize compareBuffer		
	compareBuffer = 55 55 04 00 01		
	02 03 04 05 06		
	07 08 09 0A 0B		
	OC OD OE OF 55		

ld	Description	API Expectation	APDU Expectation
	Compare buffers	Result is 00h	
	findAndCompareValue()		
	compareOffset = 2		
13	Initialize 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	
	findAndCompareValue()		
	compareOffset = 2		
14	Initialize compareBuffer		
14	compareBuffer =		
	155 55 04 00 01		
	02 03 04 05 06		
	07 08 09 0A 0B		
	OC OD OD 10 55		
	Compare buffers	Result is +1	
	findAndCompareValue()		
	compareOffset = 2		
15	initDisplayText()		
	dcs = 4		
	buffer = 00 01 0F		
	Initialize compareBuffer		
	CompareBuffer = 04 00 01 0F		
	Successful call (with tag 8Dh)	Result is 00h	
	findAndCompareValue()		
	tag = 8Dh		
	compareBuffer.length = 17		
	compareOffset = 0		
16	Append tag 0Fh		
	buffer = 00 01 0F		
	Initialize compareBuffer		
	compareBuffer = 00 01 0F		
	Successful call (with tag 8Fh)	Result is 00h	
	findAndCompareValue()		
	tag = 8Fh		
	compareBuffer.length = 16		
	compareOffset = 0		
17	Initialize compareBuffer		
	compareBuffer = 00 99 01 03 0F	Deput is 14	
	Successful call (with tag 8Fh)	Result is +1	
	findAndCompareValue()		
	<pre>tag = 8Fh compareBuffer.length = 16</pre>		
	compareOffset = 0		
	COmpareoriset = 0		

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

Test Area Reference Api_2_Pah_Facrbbs_Bss.

5.2.4.16.1 Conformance requirement

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

5.2.4.16.1.1 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 Comprehension TLV is less than that in compareBuffer -1 is returned.
- CRRN5: if the first miscomparing byte in Comprehension TLV is greater than that in compareBuffer 1 is returned.
- CRRN6: The search method is comprehension required flag independent.

5.2.4.16.1.2 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 is negative or valueOffset + dstLength > current TLV length, 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.

5.2.4.16.1.3 Context errors

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

5.2.4.16.2 Test area files

Test Source: Test_Api_2_Pah_Facrbbs_Bss.java.

Test Applet: Api_2_Pah_Facrbbs_Bss_1.java.

Cap File: api_2_pah_facrbbs_bss.cap.

5.2.4.16.3 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

5.2.4.16.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialize the handler	1	•
<u> </u>	findAndCompareValue() with a null compareBuffer	NullPointerException is thrown	
2	initDisplayText() with length = 15		
	<pre>compareOffset > compareBuffer.length findAndCompareValue() tag = 0Dh, occurrence = 1 valueOffset = 0 compareBuffer.length = 5 compareOffset = 6 compareLength = 0</pre>	ArrayIndexOutOfBoundsException is thrown	
3	<pre>compareOffset < 0 findAndCompareValue() compareBuffer.length = 5 compareOffset = -1 compareLength = 1</pre>	ArrayIndexOutOfBoundsException is thrown	
4	<pre>compareLength >compareBuffer.length findAndCompareValue() compareBuffer.length = 5 compareOffset = 0 compareLength = 6</pre>	ArrayIndexOutOfBoundsException is thrown	
5	<pre>compareOffset + compareLength >compareBuffer.length findAndCompareValue() compareBuffer.length = 5 compareOffset = 3 compareLength = 3</pre>	ArrayIndexOutOfBoundsException is thrown	
6	<pre>compareLength < 0 findAndCompareValue() compareBuffer.length = 5 compareOffset = 0 compareLength = -1</pre>	ArrayIndexOutOfBoundsException is thrown	
7	initDisplayText() with length = 5		
	<pre>valueOffset > Text String Length findAndCompareValue() 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 findAndCompareValue() valueOffset = -1 compareBuffer.length = 15 compareOffset = 0 compareLength = 1</pre>	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
9	<pre>compareLength > Text String length findAndCompareValue() 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 findAndCompareValue() occurrence = 0	ToolkitException.BAD_INPUT_PA RAMETER is thrown	

· · ·	5	ADIE	ADDILE
ld	Description	API Expectation	APDU Expectation
12	InitDisplayText()		
	Select a TLV (tag 02h)		
	findAndCompareValue()	ToolkitException.UNAVAILABLE_	
	tag = 0Dh	ELEMENT is thrown	
	occurrence = 2		
	Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown.	
13	initDisplayText()		
'	dcs = 4		
	buffer = 00 01 0F		
	Initialize compareBuffer		
	compareBuffer =		
	04 00 01 0F		
	findAndCompareValue()	Result is 00h	
	tag = 0Dh, occurrence = 1	result is som	
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 17		
14	Verify current TLV	Result is 17	
1 .	getValueLength()		
1	<u> </u>		
15	Initialize compareBuffer		
.5	compareBuffer =		
1	04 00 01 10		
	Compare buffers with same parameters	Result is -1	
	Compare suriore man came parameters	result is	
16	Initialize compareBuffer		
10	compareBuffer =		
	03 00 01 0F		
	Compare buffers with same parameters	Result is +1	
	Compare buriers with same parameters	result is 11	
17	Initialize compareBuffer		
17	compareBuffer =		
	155 55 55 01 02		
	03 04 05 06 07		
	08 09 0A 0B 0C		
	55 55 55 55 55		
	Compare buffers	Result is 00h	
	findAndCompareValue()		
	valueOffset = 2		
	compareOffset = 3		
	compareLength = 12		
18	Initialize compareBuffer		
	compareBuffer =		
	55 55 55 02 01		
	03 04 05 06 07		
	08 09 0A 0B 0C		
	55 55 55 55 55 Common buffers with some more markets	Deput in A	
1	Compare buffers with same parameters	Result is -1	
	1 11 11		
19	Initialize compareBuffer		
	compareBuffer =		
	55 55 55 01 02		
	03 04 05 06 07 08 09 0A 0A 0D		
1	55 55 55 55 55		
	Compare buffers with same parameters	Result is +1	
	Compare pariers with same parameters	INGOUIL IS TI	
20	annond a Tayt String TIV	+	
20	append a Text String TLV		
	tag = 0Dh buffer = 00 11 22 33 44 55		
	Initialize compareBuffer		
	compareBuffer =		
1	04 00 01 OF		
	findAndCompareValue()	Result is 00h	
	tag = 0Dh, occurrence = 1	INGOUIL IS OUT	
1	<pre>valueOffset = 0</pre>		
	compareOffset = 0		
1	compareLength = 17		
1			
	I .	ı	

ld	Description	API Expectation	APDU Expectation
21	Initialize compareBuffer		C -Apadanan
21	compareBuffer =		
	00 11 22 33 44 55		
	findAndCompareValue()	Result is 00h	
	tag = 0Dh, occurrence = 2	TCGGIL IS OOT	
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 6		
22	Initialize compareBuffer		
	compareBuffer =		
	00 11 22 33 44 66		
	findAndCompareValue()	Result is -1	
	tag = 0Dh, occurrence = 2	Trooding 1	
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 6		
23	initDisplayText()		
	dcs = 4		
	buffer = 00 01 0F		
	Initialize compareBuffer		
	CompareBuffer = 04 00 01 0F		
	Successful call (with tag 8Dh)	Result is 00h	
	findAndCompareValue()		
	tag = 8Dh, occurrence = 1		
	<pre>valueOffset = 0</pre>		
	compareBuffer.length = 17		
	compareOffset = 0		
	compareLength = 17		
24	Append tag 0Fh		
	buffer = 00 01 0F		
	Initialize compareBuffer		
	compareBuffer = 00 01 0F		
	Successful call (with tag 8Fh)	Result is 00h	
	findAndCompareValue()		
	tag = 8Fh, occurrence = 1		
	valueOffset = 0		
	compareBuffer.length = 16		
	<pre>compareOffset = 0 compareLength = 16</pre>		
25	Initialize compareBuffer		
∠5	compareBuffer =0099 02 0F		
		Docult in 1.1	
	<pre>findAndCompareValue() findAndCompareValue()</pre>	Result is +1	
	tag = 0Dh, occurrence = 1		
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 17		
	comparencingen - 17		<u>l</u>

5.2.4.17 Method appendArray

Test Area Reference: Api_2_Pah_Apda.

5.2.4.17.1 Conformance requirement

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

5.2.4.17.1.1 Normal execution

- CRRN1: appends a buffer into the Edithandler buffer.
- CRRN2: a successful append does not modify the TLV selected.

5.2.4.17.1.2 Parameter errors

- 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.

5.2.4.17.1.3 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.

5.2.4.17.2 Test area files

Test Source: Test_Api_2_Pah_Apda.java.

Test Applet: Api_2_Pah_Apda_1.java.

Cap File: api_2_pah_apda.cap.

5.2.4.17.3 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

5.2.4.17.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Null buffer	NullPointerException is thrown	-
	appendArray()	·	
2	offset > buffer.length	ArrayIndexOutOfBoundsExceptio	
	appendArray()	n is thrown	
	buffer.length = 5		
	offset = 6		
	length = 0		
3	offset < 0	ArrayIndexOutOfBoundsExceptio	
	appendArray()	n is thrown	
	buffer.length = 5		
	offset = -1		
	length = 1		
4	length > buffer.length	ArrayIndexOutOfBoundsExceptio	
	appendArray()	n is thrown	
	buffer.length = 5		
	offset = 0		
_	length = 6	A 1 1 0 10'D 1 5 1:	
5	offset + length > buffer.length	ArrayIndexOutOfBoundsExceptio	
	appendArray()	n is thrown	
	buffer.length = 5		
	offset = 3		
	length = 3		

ld	Description	API Expectation	APDU Expectation
6	length < 0	ArrayIndexOutOfBoundsExceptio	
	appendArray()	n is thrown	
	buffer.length = 5	II IO UIIOWII	
	offset = 0		
	length = -1		
7	Handler overflow exception	ToolkitException.HANDLER_OVE	
	appendArray()	RFLOW is thrown	
	<pre>buffer.length = getCapacity()+1</pre>		
	offset = 0		
8	length = getCapacity()+1 Initialize handler	+	
Ø	Select Command Details TLV		
	Successful call		
	appendArray()		
	buffer = FF FE F8		
	offset = 0		
	length = 8		
	Verify Current TLV: Call getValueLength()	Result is 03h	
9	Clear the handler		
	Successful call		
	appendArray()		
	buffer = FF FE F8		
	offset = 0		
	length = 8		
	Call copy() method	D 11 (
	Compare the arrays	Result of	
	compareBuffer = FF FE F8	javacard.framework.Util.arrayCom	
		pare() is 00h	
10	Successful call		
	appendArray()		
	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.arrayCom	
	_	pare() is 00h	
11	Successful call	1 V	
	appendArray()		
	buffer = 11 22 88		
	offset = 2		
	length = 4		
	Call copy() method	D 11 (
	Compare the arrays compareBuffer = FF FE F8 02 03 07 33	Result of	
	compareBuffer = FF FE F8 02 03 07 33 44 55 66	javacard.framework.Util.arrayCom	
40		pare() is 00h	
12	Clear the handler		
	Cupped for the little		
	Successful call appendArray()		
	buffer = 00 01 FC		
	offset = 0		
	length = 253		
	Call getLength() method	result = 253	
	3 3 0 1 1 1		
	Call copy() method		
	170		
	Compare handler	Result of	
	compareBuffer = 00 01 FC	javacard.framework.Util.arrayCom	
		pare() is 00h	
	I	IF (/ 55	

5.2.4.18 Method appendTLV(byte tag, byte value)

Test Area Reference: Api_2_Pah_Aptlbb.

5.2.4.18.1 Conformance requirement:

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

5.2.4.18.1.1 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.

5.2.4.18.1.2 Parameter errors

No requirements.

5.2.4.18.1.3 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.

5.2.4.18.2 Test area files

Test Source: Test_Api_2_Pah_Aptlbb.java.

Test Applet: Api_2_Pah_Aptlbb_1.java.

Cap File: api_2_pah_aptlbb.cap.

5.2.4.18.3 Test coverage

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

5.2.4.18.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call appendArray()		
	<pre>length = getCapacity()-1</pre>		
	Handler Overflow exception:	ToolkitException.HANDLER_OVE	
	Call the appendTLV() method	RFLOW is thrown	
2	Initialize handler		
	Select Command Details TLV		
	Call the appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	

ld	Description	API Expectation	APDU Expectation
3	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 84h		
	value = 00h		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 01 00	javacard.framework.Util.arrayCom	
		pare() is 00h	
4	Successful call		
	appendTLV()		
	tag = 01h		
	value = FEh		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 01 00 01 01 FE	javacard.framework.Util.arrayCom	
		pare() is 00h	
5	Clear the handler		
	Call appendArray()		
	length = 250		
	buffer = 00 81 F7 03 04 F9		
	Successful call		
	appendTLV()		
	tag = 84h		
	value = 00h		
	Call getLength() method	result = 253	
	Call copy() method		
	Compare the array	Result of	
	compareBuffer = 00 81 F7 03 04 F9 84 01 00	javacard.framework.Util.arrayCom pare() is 00h	

5.2.4.19 Method appendTLV(byte tag, byte value1, byte value2)

Test Area Reference: Api_2_Pah_Aptlbbb.

5.2.4.19.1 Conformance requirements

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

5.2.4.19.1.1 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.

5.2.4.19.1.2 Parameter errors

No requirements.

5.2.4.19.1.3 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.

5.2.4.19.2 Test area files

Test Source: Test_Api_2_Pah_Aptlbbb.java.

Test Applet: Api_2_Pah_Aptlbbb_1.java.

Cap File: api_2_pah_aptlbbb.cap.

5.2.4.19.3 Test coverage

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

5.2.4.19.4 Test procedure

1	
length = getCapacity()-1 Handler Overflow exception: Call the appendTLV() method Initialize handler Select Command Details TLV Call the appendTLV() method Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 84h value1 = 00h value2 = 01h Call copy() method Compare the arrays compareBuffer = 84 02 00 01 RookitException.HANDLER_OVE RFLOW is thrown ToolkitException.HANDLER_OVE RFLOW is thrown Result is 03h Result is 03h Result of javacard.framework.Util.arrayCom pare() is 00h	
Call the appendTLV() method RFLOW is thrown 2	
2 Initialize handler Select Command Details TLV Call the appendTLV() method Verify Current TLV: Call getValueLength() Result is 03h 3 Clear the handler Successful call appendTLV() tag = 84h value1 = 00h value2 = 01h Call copy() method Compare the arrays compareBuffer = 84 02 00 01 Result is 03h Result is 03h Result is 03h Result is 03h	
Select Command Details TLV Call the appendTLV() method Verify Current TLV: Call getValueLength() Result is 03h 3 Clear the handler Successful call appendTLV() tag = 84h value1 = 00h value2 = 01h Call copy() method Compare the arrays compareBuffer = 84 02 00 01 Result of javacard.framework.Util.arrayCom pare() is 00h	
Select Command Details TLV Call the appendTLV() method Verify Current TLV: Call getValueLength() Result is 03h 3 Clear the handler Successful call appendTLV() tag = 84h value1 = 00h value2 = 01h Call copy() method Compare the arrays compareBuffer = 84 02 00 01 Result of javacard.framework.Util.arrayCom pare() is 00h	
Call the appendTLV() method Verify Current TLV: Call getValueLength() Result is 03h Clear the handler Successful call appendTLV() tag = 84h value1 = 00h value2 = 01h Call copy() method Compare the arrays compareBuffer = 84 02 00 01 Result of javacard.framework.Util.arrayCom pare() is 00h	
Verify Current TLV: Call getValueLength() Result is 03h Clear the handler Successful call appendTLV() tag = 84h value1 = 00h value2 = 01h Call copy() method Compare the arrays compareBuffer = 84 02 00 01 Result is 03h Result is 03h Result is 03h	
3 Clear the handler Successful call appendTLV() tag = 84h value1 = 00h value2 = 01h Call copy() method Compare the arrays compareBuffer = 84 02 00 01 Result of javacard.framework.Util.arrayCom pare() is 00h	
Successful call appendTLV() tag = 84h value1 = 00h value2 = 01h Call copy() method Compare the arrays compareBuffer = 84 02 00 01 Result of javacard.framework.Util.arrayCom pare() is 00h	
Successful call appendTLV() tag = 84h value1 = 00h value2 = 01h Call copy() method Compare the arrays compareBuffer = 84 02 00 01 Result of javacard.framework.Util.arrayCom pare() is 00h	
appendTLV() tag = 84h value1 = 00h value2 = 01h Call copy() method Compare the arrays compareBuffer = 84 02 00 01 Result of javacard.framework.Util.arrayCom pare() is 00h	
tag = 84h value1 = 00h value2 = 01h Call copy() method Compare the arrays compareBuffer = 84 02 00 01 Result of javacard.framework.Util.arrayCom pare() is 00h	
value2 = 01h Call copy() method Compare the arrays compareBuffer = 84 02 00 01 pare() is 00h Result of javacard.framework.Util.arrayCom pare() is 00h	
Call copy() method Compare the arrays compareBuffer = 84 02 00 01 pare() is 00h Result of javacard.framework.Util.arrayCom pare() is 00h	
Compare the arrays compareBuffer = 84 02 00 01 pare() is 00h Result of javacard.framework.Util.arrayCom pare() is 00h	
compareBuffer = 84 02 00 01 javacard.framework.Util.arrayCom pare() is 00h	
pare() is 00h	
4 Successful call	
3	
appendTLV() tag = 01h	
value1 = FEh	
value2 = FDh	
Call copy() method	
Compare the arrays Result of	
compareBuffer = 84 02 00 01 01 02 FE FD javacard.framework.Util.arrayCom	
pare() is 00h	
5 Clear the handler	
Call amound Amount	
Call appendArray() length = 249	
buffer = 00 81 F6 03 04 F8	
Successful call	
appendTLV()	
tag = 84h	
value1 = 00h	
value2 = 01h	
Call getLength() method result = 253	
Call copy() method	
Compare handler Result of	
compareBuffer = 00 81 F6 03 04 F8 84 02 javacard.framework.Util.arrayCom	
00 01 pare() is 00h	

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

Test Area Reference: Api_2_Pah_Aptlb_Bss.

5.2.4.20.1 Conformance requirement

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

5.2.4.20.1.1 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.

5.2.4.20.1.2 Parameter errors

- 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.

5.2.4.20.1.3 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.

5.2.4.20.2 Test area files

Test Source: Test_Api_2_Pah_Aptlb_Bss.java.

Test Applet: Api_2_Pah_Aptlb_Bss_1.java.

Cap File: api_2_pah_aptlb_bss.cap.

5.2.4.20.3 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

5.2.4.20.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Null value	NullPointerException is thrown	
•	appendTLV()	Train onto Excoption is thown	
2	valueOffset > value.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value.length = 5		
	valueOffset = 6		
3	valueLength = 0 valueOffset < 0	ArrayIndexOutOfPoundsEveentie	
3	appendTLV()	ArrayIndexOutOfBoundsExceptio n is thrown	
	value.length = 5	n is thrown	
	valueOffset = -1		
	valueLength = 1		
4	valueLength > value.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value.length = 5		
	valueOffset = 0		
5	valueLength = 6 valueOffset + valueLength > value.length	ArrayIndayOutOfPaundaEvaantia	
5	appendTLV()	ArrayIndexOutOfBoundsExceptio n is thrown	
	value.length = 5	II IS UIIOWII	
	valueOffset = 3		
	valueLength = 3		
6	valueLength < 0	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value.length = 5		
	valueOffset = 0		
7	valueLength = -1 Handler overflow exception	ToolkitEvention HANDLED OVE	
′	Call the appendArray() method, length =	ToolkitException.HANDLER_OVE RFLOW is thrown	
	getCapacity()-1	IZI FOAA 19 IIIIOMII	
	appendTLV()		
	value.length = 254		
	<pre>valueOffset = 0</pre>		
	valueLength = 254		
8	Bad parameter exception	ToolkitException.BAD_INPUT_PA	
	Clear the handler appendTLV()	RAMETER is thrown	
	value.length = 256		
	valueOffset = 0		
	valueLength = 256		
9	Initialize handler		
	Select Command Details TLV		
	Successful call		
	appendTLV()		
	tag = 04		
	<pre>value = FF FE F8 valueOffset = 0</pre>		
	valueOliser = 0		
	valueLength = 8		
	valueLength = 8 Verify Current TLV: Call getValueLength()	Result is 03h	
10	Verify Current TLV: Call getValueLength()	Result is 03h	
10	Verify Current TLV: Call getValueLength() Clear the handler	Result is 03h	
10	Verify Current TLV: Call getValueLength() Clear the handler Successful call	Result is 03h	
10	Verify Current TLV: Call getValueLength() Clear the handler	Result is 03h	
10	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV()	Result is 03h	
10	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 04 value = FF FE F8 valueOffset = 0	Result is 03h	
10	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 04 value = FF FE F8 valueOffset = 0 valueLength = 8	Result is 03h	
10	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 04 value = FF FE F8 valueOffset = 0 valueLength = 8 Call copy() method		
10	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 04 value = FF FE F8 valueOffset = 0 valueLength = 8 Call copy() method Compare the arrays	Result of	
10	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 04 value = FF FE F8 valueOffset = 0 valueLength = 8 Call copy() method	Result of javacard.framework.Util.arrayCom	
	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 04 value = FF FE F8 valueOffset = 0 valueLength = 8 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8	Result of	
10	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 04 value = FF FE F8 valueOffset = 0 valueLength = 8 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 Successful call	Result of javacard.framework.Util.arrayCom	
	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 04 value = FF FE F8 valueOffset = 0 valueLength = 8 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 Successful call appendTLV()	Result of javacard.framework.Util.arrayCom	
	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 04 value = FF FE F8 valueOffset = 0 valueLength = 8 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 Successful call appendTLV() tag = 85h	Result of javacard.framework.Util.arrayCom	
	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 04 value = FF FE F8 valueOffset = 0 valueLength = 8 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 Successful call appendTLV() tag = 85h value = 00 01 07	Result of javacard.framework.Util.arrayCom	
	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 04 value = FF FE F8 valueOffset = 0 valueLength = 8 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 Successful call appendTLV() tag = 85h value = 00 01 07 valueOffset = 2	Result of javacard.framework.Util.arrayCom	
	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 04 value = FF FE F8 valueOffset = 0 valueLength = 8 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 Successful call appendTLV() tag = 85h value = 00 01 07 valueOffset = 2 valueLength = 6	Result of javacard.framework.Util.arrayCom	
	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 04 value = FF FE F8 valueOffset = 0 valueLength = 8 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 Successful call appendTLV() tag = 85h value = 00 01 07 valueOffset = 2 valueLength = 6 Call copy() method	Result of javacard.framework.Util.arrayCompare() is 00h	
	Verify Current TLV: Call getValueLength() Clear the handler Successful call appendTLV() tag = 04 value = FF FE F8 valueOffset = 0 valueLength = 8 Call copy() method Compare the arrays compareBuffer = 04 08 FF FE F8 Successful call appendTLV() tag = 85h value = 00 01 07 valueOffset = 2 valueLength = 6	Result of javacard.framework.Util.arrayCom	

ld	Description	API Expectation	APDU Expectation
12	Successful call	-	-
	appendTLV()		
	tag = 01		
	value = 11 22 88		
	<pre>valueOffset = 2</pre>		
	valueLength = 4		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 04 08 FF FE F8 85 06 02	javacard.framework.Util.arrayCom	
	03 07 01 04 33 44 55 66	pare() is 00h	
13	Clear the handler	· ·	
	Successful call		
	appendTLV()		
	tag = 04		
	value = 00 01 7F		
	<pre>valueOffset = 0</pre>		
	valueLength = 80h		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 04 81 80 00 017F	javacard.framework.Util.arrayCom	
		pare() is 00h	
14	Clear the handler	· ·	
	Successful call		
	appendTLV()		
	tag = 04		
	value = 00 01 F9		
	<pre>valueOffset = 0</pre>		
	valueLength = 250		
	Call getLength() method	result = 253	
	Call carry() mostly and		
	Call copy() method		
	Compare handler	Result of	
	compareBuffer = 04 81 FA 00 01F9	javacard.framework.Util.arrayCom	
	01 01 11 00 01	pare() is 00h	

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

Test Area Reference: Api_2_Pah_Aptlbb_Bss.

5.2.4.21.1 Conformance requirement

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

5.2.4.21.1.1 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.

5.2.4.21.1.2 Parameter errors

- 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.

5.2.4.21.1.3 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.

5.2.4.21.2 Test area files

Test Source: Test_Api_2_Pah_Aptlbb_Bss.java.

Test Applet: Api_2_Pah_Aptlbb_Bss_1.java.

Cap File: api_2_pah_aptlbb_bss.cap.

5.2.4.21.3 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

5.2.4.21.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Null value2	NullPointerException is thrown	
	appendTLV()	·	
2	value2Offset > value2.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value2.length = 5		
	<pre>value20ffset = 6</pre>		
	<pre>value2Length = 0</pre>		
3	value2Offset < 0	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value2.length = 5		
	value20ffset = -1		
	value2Length = 1		
4	value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value2.length = 5		
	value2Offset = 0		
	value2Length = 6		
5	value2Offset + value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value2.length = 5		
	value2Offset = 3		
	value2Length = 3		

ld	Description	API Expectation	APDU Expectation
6	value2Length < 0	ArrayIndexOutOfBoundsExceptio	AF DO Expectation
0	appendTLV()	n is thrown	
	value2.length = 5	n is thrown	
	value20ffset = 0		
	value2Length = -1		
7	Handler overflow exception	ToolkitException.HANDLER_OVE	
	Call the appendArray() method, length =	RFLOW is thrown	
	getCapacity()-1		
	appendTLV()		
	<pre>value2.length = 254 value20ffset = 0</pre>		
	value2Length = 254		
8	Bad parameter exception	ToolkitException.BAD_INPUT_PA	
	Clear the handler	RAMETER is thrown	
	appendTLV()	TOWNE TER 13 UNIOWN	
	value2.length = 256		
	value2Offset = 0		
	value2Length = 256		
9	Initialize handler		
	Select Command Details TLV		
	Successful call		
	appendTLV()		
	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		
	appendTLV()		
	tag = 04		
	value1 = 05		
	value2 = FF FE F8		
	<pre>value2Offset = 0 value2Length = 8</pre>		
	Call copy() method		
	Compare the arrays	Result of	
	CompareBuffer = 04 09 05 FF FE F8	javacard.framework.Util.arrayCom	
	oomparedarier or os os if is m re	pare() is 00h	
11	Successful call		
	appendTLV()		
	tag = 85h		
	value1 = 55h		
	value2 = 00 01 07		
	<pre>value2Offset = 2 value2Length = 6</pre>		
	Call copy() method		
	Can copy() method Compare the arrays	Result of	
	compareBuffer =	javacard.framework.Util.arrayCom	
	04 09 05 FF FE F8	pare() is 00h	
	85 07 55 02 03 07	pare() is our	
12	Successful call		
	appendTLV()		
	tag = 01		
	value1 = 44h		
	<pre>value2 = 11 22 88 value20ffset = 2</pre>		
	value2Driset = 2 value2Length = 4		
	Call copy() method		
	Compare the arrays	Result of	
	CompareBuffer =	javacard.framework.Util.arrayCom	
	04 09 05 FF FE F8	pare() is 00h	
	85 07 55 02 03 07	paro() is 0011	
	01 05 44 33 44 55 66		

ld	Description	API Expectation	APDU Expectation
13	Clear the handler	-	
	Successful call		
	appendTLV()		
	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.arrayCom	
		pare() is 00h	
14	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 04		
	value1 = 00		
	value2 = 01 F9		
	value2Offset = 0		
	value2Length = 249		
	Call getLength() method	result = 253	
	Call copy() method		
	Compare handler	Result of	
	compareBuffer = 04 81 FA 00 01F9	javacard.framework.Util.arrayCom	
		pare() is 00h	

5.2.4.22 Method clear

Test Area Reference: Api_2_Pah_Cler.

5.2.4.22.1 Conformance requirement

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

5.2.4.22.1.1 Normal execution

- CRRN1: Clears the TLV list of an EditHandler.
- CRRN2: Resets the current TLV selected.

5.2.4.22.1.2 Parameter errors

No requirements.

5.2.4.22.1.3 Context errors

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

5.2.4.22.2 Test area files

Test Source: Test_Api_2_Pah_Cler.java.

Test Applet: Api_2_Pah_Cler_1.java.

Cap File: api_2_pah_cler.cap.

5.2.4.22.3 Test coverage

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

5.2.4.22.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Initialize 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	

5.2.4.23 Method getCapacity

Test Area Reference: Api_2_Pah_Gcap.

5.2.4.23.1 Conformance requirement

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

public byte getCapacity()

5.2.4.23.1.1 Normal execution

• CRRN1: The method shall return the maximum size of the Comprehension TLV list managed by the handler.

5.2.4.23.1.2 Parameter errors

No requirements.

5.2.4.23.1.3 Context errors

No requirements.

5.2.4.23.2 Test area files

Test Source: Test_Api_2_Pah_Gcap.java.

Test Applet: Api_2_Pah_Gcap_1.java.

Cap File: api_2_pah_gcap.cap.

5.2.4.23.3 Test coverage

CRR number	Test case number	
N1	1	

5.2.4.23.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	ProactiveHandler available		
	1- Send envelope Menu Selection 2- The applet calls getTheHandler() 3- The applet calls getCapacity() on the ProactiveHandler 4- The applet fills the handler with the maximum capacity, using appendTLV() method 5- The applet calls clear() on the	1- Applet is triggered 2- No exception is thrown 3- No exception is thrown, the capacity shall not be null 4- No exception is thrown	
	proactive handler 6- The applet fills the handler with the	5- No exception is thrown	
	maximum capacity plus one, using appendTLV() method	6- HANDLER_OVERFLOW exception is thrown	

5.2.4.24 Method initCloseChannel

Test Area Reference: Api_2_Pah_Icch.

5.2.4.24.1 Conformance requirement

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

public void initCloseChannel(byte bChannelIdentifier)

5.2.4.24.1.1 Normal execution

- CRRN1: The method shall build a Close Channel Proactive command, using Channel Identifier. Comprehension Required flags are set.
- CRRN2: A call to this method clears the handler then initializes it with Close Channel Proactive command.
- CRRN3: After the method invocation, no TLV is selected.
- CRRN4: The Close Channel Proactive command is not sent by the method.

5.2.4.24.1.2 Parameter errors

No requirements.

5.2.4.24.1.3 Context errors

No requirements.

5.2.4.24.2 Test area files

Test Source: Test_Api_2_Pah_Icch.java.

Test Applet: Api_2_Pah_Icch_1.java.

Cap File: api_2_pah_icch.cap.

5.2.4.24.3 Test coverage

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

5.2.4.24.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Applet1 is installed with maximum number of channel = 01.		
1	Call initCloseChannel() method 1- Call ProactiveHandler.init() method to open a Channel. Call ProactiveHandler.send() method.	2- Applet1 is triggered.	1- OPEN CHANNEL proactive command is fetched. TERMINAL RESPONSE of OPEN CHANNEL is sent to
	2- Send an EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS Envelope.	5- Applet1 is not triggered.	the UICC with Channel Id = 01.
	3- Call ProactiveHandler.initCloseChannel() method with Channel Id = 01.		4- CLOSE CHANNEL proactive command is fetched.
	4- Call ProactiveHandler.send() method. 5- Send an EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS Envelope.		TERMINAL RESPONSE of CLOSE CHANNEL is sent to the UICC.
2	Call the initCloseChannel () method with any value then build and send a CLOSE CHANNEL command	5- Applet1 is not triggered.	1- OPEN CHANNEL proactive command is fetched.
	1- Call ProactiveHandler.init() method to open a Channel and ProactiveHandler.send() method. 2- Call		TERMINAL RESPONSE of OPEN CHANNEL is sent to the UICC with Channel Id = 01.
	ProactiveHandler.initCloseChannel() method with Channel Id = 2 3- Call ProactiveHandler.initCloseChannel() method with the Channel Id = 1.		4- CLOSE CHANNEL proactive command is fetched.
	4- Call send() method. 5- Send an EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS Envelope.		TERMINAL RESPONSE of CLOSE CHANNEL is sent to the UICC.
3	Select a TLV in the ProactiveHandler Call the initCloseChannel () method	3- UNAVAILABLE_ELEMENT ToolkitException is thrown by getValueLength() method.	1- OPEN CHANNEL proactive command is fetched.
	1- Call ProactiveHandler.init() method to open a Channel and call the ProactiveHandler.send() method. Select 1st TLV of the Proactive Handler. 2- Call		TERMINAL RESPONSE of OPEN CHANNEL is sent to the UICC with Channel Id = 01.
	ProactiveHandler.initCloseChannel() method with Channel Id = 01. 3- Call ViewHandler.getValueLength() method.		4- CLOSE CHANNEL proactive command is fetched.
	4- Call ProactiveHandler.send() method.		TERMINAL RESPONSE of CLOSE CHANNEL is sent to the UICC.

ld	Description	API Expectation	APDU Expectation
4	Call the initCloseChannel() without sending		1- OPEN CHANNEL
	the command		proactive command is
		3- Applet1 is triggered.	fetched.
	1- Call ProactiveHandler.init() method to		
	open a Channel and call the		TERMINAL RESPONSE of
	ProactiveHandler.send() method.		OPEN CHANNEL is sent to
	2- Call		the UICC with Channel Id =
	ProactiveHandler.initCloseChannel()		01.
	method with Channel Id = 01 without		
	ProactiveHandler.send().		
			No proactive command shall
	3- Send an		be sent. Expected status is
	EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS		'9000'
	Envelope.		0000

5.2.4.25 Method getValueShort

Test Area Reference: Api_2_Pah_Gvsh.

5.2.4.25.1 Conformance requirement

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

5.2.4.25.1.1 Normal execution

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

5.2.4.25.1.2 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.

5.2.4.25.1.3 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.

5.2.4.25.2 Test area files

Specific triggering: None

Test Source: Test_Api_2_Pah_Gvsh.java.

Test Applet: Api_2_Pah_Gvsh_1.java.

Cap File: api_2_pah_gvsh.cap.

5.2.4.25.3 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	

5.2.4.25.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call the init() method		
	type = FFh		
	qualifier = FEh destination = FDh		
		ToolkitEveention LINIAN/ALL ADLE	
	getValueShort(0)	ToolkitException.UNAVAILABLE_ ELEMENT is thrown	
2	Search TLV 01h (Command Details TLV)	ELEMENT IS UTOWN	
	getValueShort(3)	ToolkitEveention OUT OF TIV	
	gervalueshori(3)	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
3	Search TLV 01h (Command Details TLV)	BOONDAKIES IS IIIIOWII	
3	getValueShort(1)	Result is FFh FEh (type, qualifier)	
	gervalueonori(1)	ixesuit is FFII FEII (type, quaillei)	
4	Search TLV 02h (Device Identities TLV)		
	getValueShort(0)	Result is 81h FDh (Source,	
	3	Destination)	
5	initDisplayText()	,	
	buffer = 00 01 7D		
	length = 7Eh		
	Search TLV 0Dh (Text String TLV)		
	getValueShort(7D)	Result is 7Ch 7Dh	
6	initDisplayText()		
	buffer = 00 01 7D 7E		
	length = 7Fh		
	Search TLV 0Dh (Text String TLV)		
	getValueShort(7D)	Result is 7Ch 7Dh	
7	getValueShort(7E)	Result is 7Dh 7Eh	
'	gerrandoment(: _/	Treedit to 7 Bit 7 Ett	
8	initDisplayText()		
	buffer = 00 01 EF		
	length = F0h		
	Search TLV 0Dh (Text String TLV)	Describis EEL EEL	
	getValueShort(EF)	Result is EEh EFh	

5.2.4.26 Method appendTLV(byte tag, byte value1, short value2)

Test Area Reference: Api_2_Pah_Aptlbbs.

5.2.4.26.1 Conformance requirements

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

5.2.4.26.1.1 Normal execution

- CRRN1: Appends a TLV element to the current TLV list (3-byte element(1-byte,1-short)).
- CRRN2: A successful append does not modify the TLV selected.

5.2.4.26.1.2 Parameter errors

No requirements.

5.2.4.26.1.3 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.

5.2.4.26.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Pah_Aptlbbs.java.

Test Applet: Api_2_Pah_Aptlbbs_1.java.

Cap File: api_2_pah_aptlbbs.cap.

5.2.4.26.3 Test coverage

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

5.2.4.26.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call the appendArray()		
	<pre>length = getCapacity()-1</pre>		
	Handler Overflow exception:	ToolkitException.HANDLER_OVE	
	Call the appendTLV() method	RFLOW is thrown	
2	Initialize handler		
	Select Command Details TLV		
	Call the appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	
3	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 84h		
	value1 = 00h		
	value2 = 01h 02h		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 03 00 01 02	javacard.framework.Util.arrayCom	
		pare() is 00h	
4	Successful call		
	appendTLV()		
	tag = 01h		
	value1 = FEh value2 = FDh FCh		
	Call copy() method	Decult of	
	Compare the arrays compareBuffer = 84 03 00 01 02 01 03 FE	Result of	
	FD FC	javacard.framework.Util.arrayCom	
	FD FC	pare() is 00h	

ld	Description	API Expectation	APDU Expectation
5	Clear the handler		
	Call appendArray()		
	length = 248		
	buffer = 00 81 F5 03 04 F7		
	Successful call		
	appendTLV()		
	tag = 84h		
	value1 = 00h		
	value2 = 01h 02h		
	Call getLength() method	result = 253	
	Call copy() method		
	Compare handler	Result of	
	compareBuffer = 00 81 F5 03 04 F7 84 03	javacard.framework.Util.arrayCom	
	00 01 02	pare() is 00h	

5.2.4.27 Method appendTLV(byte tag, short value)

Test Area Reference: Api_2_Pah_Aptlbs.

5.2.4.27.1 Conformance requirements

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

5.2.4.27.1.1 Normal execution

- CRRN1: Appends a TLV element to the current TLV list (2-byte or 1-short element).
- CRRN2: A successful append does not modify the TLV selected.

5.2.4.27.1.2 Parameter errors

No requirements.

5.2.4.27.1.3 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.

5.2.4.27.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Pah_Aptlbs.java.

Test Applet: Api_2_Pah_Aptlbs_1.java.

Cap File: api_2_pah_aptlbs.cap.

5.2.4.27.3 Test coverage

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

5.2.4.27.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call appendArray()	·	•
	<pre>length = getCapacity()-1</pre>		
	Handler Overflow exception:	ToolkitException.HANDLER_OVE	
	Call the appendTLV() method	RFLOW is thrown	
2	Initialize handler		
	Select Command Details TLV		
	Call the appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	
3	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 84h		
	value = 00h 01h		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 02 00 01	javacard.framework.Util.arrayCom	
		pare() is 00h	
4	Successful call		
	appendTLV()		
	tag = 01h		
	value = FEh FFh Call copy() method		
		Doorth of	
	Compare the arrays compareBuffer = 84 02 00 01 01 02 FE FF	Result of	
	comparebuller = 84 02 00 01 01 02 FE FF	javacard.framework.Util.arrayCom	
	Clear the handler	pare() is 00h	
5			
	Call appendArray() length = 249		
	buffer = 00 81 F6 03 04 F8		
	Successful call		
	appendTLV()		
	tag = 84h		
	value = 00h 01h		
	Call getLength() method	result = 253	
	Call copy() method		
	Compare the array	Result of	
	compareBuffer = 00 81 F6 03 04 F8 84 02	javacard.framework.Util.arrayCom	
	00 01	pare() is 00h	

5.2.4.28 Method appendTLV(byte tag, short value1, short value2)

Test Area Reference: Api_2_Pah_Aptlbss.

5.2.4.28.1 Conformance requirements

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

5.2. 4.28.1.1 Normal execution

- CRRN1: Appends a TLV element to the current TLV list (4-byte element(2-short)).
- CRRN2: A successful append does not modify the TLV selected.

5.2.4.28.1.2 Parameter errors

No requirements.

5.2.4.28.1.3 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.

5.2.4.28.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Pah_Aptlbss.java.

Test Applet: Api_2_Pah_Aptlbss_1.java.

Cap File: api_2_pah_aptlbss.cap.

5.2.4.28.3 Test coverage

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

5.2.4.28.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call the appendArray()		
	<pre>length = getCapacity()-1</pre>		
	Handler Overflow exception:	ToolkitException.HANDLER_OVE	
	Call the appendTLV() method	RFLOW is thrown	
2	Initialize handler		
	Select Command Details TLV		
	Call the appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	

ld	Description	API Expectation	APDU Expectation
3	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 84h		
	value1 = 00h 01h		
	value2 = 02h 03h		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 04 00 01 02 03	javacard.framework.Util.arrayCom	
		pare() is 00h	
4	Successful call		
	appendTLV()		
	tag = 01h		
	value1 = FEh FDh		
	value2 = FCh FBh		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 04 00 01 02 03 01 04	javacard.framework.Util.arrayCom	
	FE FD FC FB	pare() is 00h	
5	Clear the handler		
	Call appendArray()		
	length = 247		
	buffer = 00 81 F4 03 04 F6		
	Successful call		
	appendTLV()		
	tag = 84h		
	value1 = 00h 01h		
	value2 = 02h 03h	1, 050	
	Call getLength() method	result = 253	
	Call copy() method		
	Compare handler	Result of	
	compareBuffer = 00 81 F4 03 04 F6 84 04	javacard.framework.Util.arrayCom	
	00 01 02 03	pare() is 00h	

5.2.4.29 Method appendTLV(byte tag, byte[] value1, short value1Offset, short value2Length, byte[] value2, short value2Offset, short value2Length)

Test Area Reference: Api_2_Pah_Aptlb_Bss_Bss.

5.2.4.29.1 Conformance requirements

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

5.2.4.29.1.1 Normal execution

- CRRN1: Appends a TLV element to the current TLV list (2 byte arrays format).
- CRRN2: A successful append does not modify the TLV selected.

5.2.4.29.1.2 Parameter errors

- CRRP1: If value1 or value2 is null, a NullPointerException is thrown.
- CRRP2: If value1Offset or value1Length or both would cause access outside value1 array bounds, or if value1Length is negative, an ArrayIndexOutOfBoundsException is thrown.
- CRRP3: If value2Offset or value2Length or both would cause access outside value2 array bounds, or if value2Length is negative, an ArrayIndexOutOfBoundsException is thrown.

5.2.4.29.1.3 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 value1Length or value2Length is greater than 255, a ToolkitException is thrown with reason code BAD_INPUT_PARAMETER.

5.2.4.29.2 Test area files

Test Source: Test_Api_2_Pah_Aptlb_Bss_Bss.java.

Test Applet: Api_2_Pah_Aptlb_Bss_Bss_1.java.

Cap File: api_2_pah_aptlb_bss_bss.cap.

5.2.4.29.3 Test coverage

CRR number	Test case number
N1	18, 19, 20, 21
N2	16
P1	1, 2
P2	3, 4, 5, 6, 7
P3	8, 9, 10, 11, 12
C1	13
C2	Does not apply for ProactiveHandler
C3	14, 15

5.2.4.29.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Null value1	NullPointerException is thrown	
	appendTLV()	·	
2	Null value2	NullPointerException is thrown	
	appendTLV()	·	
3	Value1Offset ≥ value1.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value1.length = 5		
	value10ffset = 5		
	value1Length = 1		
	value2.length = 5		
	value2Offset = 0		
	value2Length = 1		

ld	Description	API Expectation	APDU Expectation
4	Value1Offset < 0	ArrayIndexOutOfBoundsExceptio	Al Do Expectation
7	appendTLV()	n is thrown	
	value1.length = 5	II IS UIIOWII	
	value10ffset = -1		
	value1Length = 1		
	value2.length = 5		
	value2Offset = 0		
_	value2Length = 1	A 1 1 0 10'D 1 5	
5	Value1Length > value1.length	ArrayIndexOutOfBoundsExceptio	
	<pre>appendTLV() value1.length = 5</pre>	n is thrown	
	value10ffset = 0		
	value1Length = 6		
	value2.length = 5		
	value2Offset = 0		
	value2Length = 1	A manufactor to the constitution of the consti	
6	Value1Offset + value1Length > value1.length appendTLV()	ArrayIndexOutOfBoundsExceptio	
	Value1.length = 5	n is thrown	
	value10ffset = 3		
	value1Length = 3		
	value2.length = 5		
	value2Offset = 0		
7	value2Length = 1 Value1Length < 0	A recorded as Out Of Dougla Cycontia	
7	appendTLV()	ArrayIndexOutOfBoundsException is thrown	
	value1.length = 5	II IS UIIOWII	
	value1Offset = 0		
	value1Length = -1		
	value2.length = 5		
	<pre>value2Offset = 0 value2Length = 1</pre>		
8	Value2Offset ≥ value2.length	ArrayIndexOutOfBoundsExceptio	
0	appendTLV()	n is thrown	
	value1.length = 5	ii io unowii	
	value10ffset = 0		
	value1Length = 1		
	value2.length = 5		
	<pre>value2Offset = 5 value2Length = 1</pre>		
9	Value2Offset < 0	ArrayIndexOutOfBoundsExceptio	
Ĭ	appendTLV()	n is thrown	
	value1.length = 5		
	value10ffset = 0		
	<pre>value1Length = 1 value2.length = 5</pre>		
	value2Offset = -1		
	value2Length = 1		
10	Value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value1.length = 5		
	<pre>value1Offset = 0 value1Length = 1</pre>		
	value2.length = 5		
	value2Offset = 0		
	value2Length = 6		
11	Value2Offset + value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	<pre>value1.length = 5 value10ffset = 0</pre>		
	value1Length = 1		
	Value2.length = 5		
	Value2Offset = 3		
	Value2Length = 3		
12	Value2Length < 0	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	<pre>value1.length = 5 value10ffset = 0</pre>		
	value1Length = 1		
	value2.length = 5		
	value2Offset = 0		
	value2Length = -1		

ld	Description	API Expectation	APDU Expectation
13	Handler overflow exception	ToolkitException.HANDLER_OVE	AI DO Expediation
13	Call the appendArray() method, length =	RFLOW is thrown	
	getCapacity()-1	RFLOW IS UNIOWN	
	appendTLV()		
	Value1.length = 256		
	Value1Offset = 0		
	Value1Length = 253		
	Value2.length = 256		
	Value2Offset = 0		
	Value2Length = 1		
14	Bad parameter exception	ToolkitException.BAD_INPUT_PA	
	Clear the handler	RAMETER is thrown	
	appendTLV()		
	Value1.length = 256		
	Value1Offset = 0 Value1Length = 256		
	Value2.length = 256		
	Value2Offset = 0		
	Value2Length = 1		
15	Bad parameter exception	ToolkitException.BAD_INPUT_PA	
.0	appendTLV()	RAMETER is thrown	
	Value1.length = 256	I I I I I I I I I I I I I I I I I I I	
	Value1Offset = 0		
	Value1Length = 1		
	Value2.length = 256		
	Value2Offset = 0		
	Value2Length = 256		
16	Successful call does not modify the current		
	TLV		
	1 -1		
	1- clear the handler, append the handler		
	with TLVs:		
	81 03 11 22 33 82 02 99 77		
	2- Select Command Details TLV by using		
	the findTLV() method		
	3- Successful call of the AppendTLV()		
	method		
	tag = 04		
	value1 = FF FE F8		
	value10ffset = 0		
	value1Length = 8		
	value2 = F7 F6 F0		
	value2Offset = 0		
	value2Length = 8		
	Verify Current TLV: Call getValueLength()	Result is 03h	
	Clear the handler	result is con	
17	Successful call		
''	appendTLV()		
	tag = 04		
	value1 = FF FE F8		
	value10ffset = 0		
	value1Length = 8		
	value2 = F7 F6 F0		
	value2Offset = 0		
	value2Length = 8 Call copy() method		
		Popult is 00	
	Compare handler	Result is 00	
40	CompareBuffer = 04 10 FF FE F0 Successful call		
18			
	appendTLV() tag = 85h		
	value1 = 00 01 07		
	value10ffset = 2		
	value1Length = 6		
	value2 = 08 09 0F		
	value2Offset = 2		
	value2Length = 6		
	Call copy() method		
	Compare handler	Result is 00	
	compareBuffer = 04 10 FF FE F0 85 0C 02 03		
	04 05 06 07 0A 0B 0C 0D 0E 0F		

ld	Description	API Expectation	APDU Expectation
19	Successful call		
	appendTLV()		
	tag = 01		
	value1 = 11 22 88		
	value1Offset = 2		
	value1Length = 4		
	value2 = 99 AA FF 00		
	value2Offset = 2		
	value2Length = 4		
	Call copy() method		
	Compare handler	Result is 00	
	compareBuffer = 04 10 FF FE F0 85 0C 02 03		
	04 05 06 07 0A 0B 0C 0D 0E 0F 01 08 33 44 55		
	66 BB CC DD EE		
	Clear the handler		
20	Successful call		
	appendTLV()		
	tag = 04		
	value1 = 00 01 7F		
	value10ffset = 0		
	value1Length = 80h		
	value2 = 80 81 FB		
	value2Offset = 0		
	value2Length = 7Ch		
	Call copy() method		
	Compare handler	Result is 00	
	compareBuffer = 04 81 FC 00 01FB		

5.2.4.30 Method initMoreTime

Test Area Reference: Api_2_Pah_Inmt.

5.2.4.30.1 Conformance requirement

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

public void initMoreTime()

5.2.4.30.1.1 Normal execution

- CRRN1: Builds a More Time Proactive command without sending the command. The Comprehension Required flags are all set to 1.
- CRRN2: After the method invocation no TLV is selected.

5.2.4.30.1.2 Parameter errors

No requirements.

5.2.4.30.1.3 Context errors

No requirements.

5.2.4.30.2 Test area files

Test Source: Test_Api_2_Pah_Inmt.java.

Test Applet: Api_2_Pah_Inmt_1.java.

Cap File: api_2_pah_inmt.cap.

5.2.4.30.3 Test coverage

CRR number	Test case number
N1	1
N2	2

5.2.4.30.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call initMoreTime() method		
	1- Call ProactiveHandler.initMoreTime(). 2- Call ProactiveHandler.send() method.		1- MORE TIME proactive command is fetched.
			TERMINAL RESPONSE of MORE TIME is sent to the UICC.
2	Select a TLV in the ProactiveHandler Call the initMoreTime() method		
	1- Select 1st TLV of the Proactive Handler.		
	2- Call ProactiveHandler.initMoreTime().		
	3- Call ViewHandler.getValueLength() method.	3- UNAVAILABLE_ELEMENT ToolkitException is thrown by getValueLength() method.	

5.2.5 Interface ProactiveResponseHandler

5.2.5.1 Method copyAdditionalInformation

Test Area Reference: Api_2_Prh_Cpai.

5.2.5.1.1 Conformance requirement

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

5.2.5.1.1.1 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 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.

5.2.5.1.1.2 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.

5.2.5.1.1.3 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.

5.2.5.1.2 Test area files

Test Source: Test_Api_2_Prh_Cpai.java.

Test Applet: Api_2_Prh_Cpai_1.java.

Cap File: api_2_prh_cpai.cap.

5.2.5.1.3 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	

5.2.5.1.4 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	NullPointerException is thrown	
	copyAdditionalInformation()		
ļ	dstBuffer = NULL		
2	dstOffset > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	copyAdditionalInformation()	n is thrown	
	dstBuffer.length = 10		
	dstOffset = 11		
	dstLength = 0		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	copyAdditionalInformation()	n is thrown	
	dstBuffer.length = 10		
	dstOffset = -1		
	dstLength = 1		
4	dstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	copyAdditionalInformation()	n is thrown	
	dstBuffer.length = 10		
	dstOffset = 0		
	dstLength = 11		

ld	Description	API Expectation	APDU Expectation
5	dstOffset + dstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	-
	<pre>copyAdditionalInformation() dstBuffer.length = 10</pre>	n is thrown	
	dstOffset = 6		
<u> </u>	dstLength = 5		
6	<pre>dstLength < 0 copyAdditionalInformation()</pre>	ArrayIndexOutOfBoundsException is thrown	
	dstBuffer.length = 10	II IS UIIOWII	
	dstOffset = 6		
7	dstLength = -1 Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
•			command
	Terminal Response with 5 additional bytes		
	Result TLV = 03 06 01 01 23 45 67 89		
	Successful call, dstBuffer is the whole buffer	result of	
	<pre>copyAdditionalInformation() dstBuffer.length = 5</pre>	copyAdditionalInformation() is 05h.	
	dstOffset = 0	0311.	
8	dstLength = 5 Compare dstBuffer using arrayCompare()	result of arrayCompare() is 00h.	
	method	losait of arrayoumpare() is our.	
	(
	<pre>src = {01, 23, 45, 67, 89} srcOffset = 00</pre>		
	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		
	Result TLV = 03 07 01 AB CD EF FE DC BA		
	Successful call, dstBuffer is part of a buffer	result of	
	<pre>copyAdditionalInformation() dstBuffer.length = 7</pre>	copyAdditionalInformation() is 07h.	
	dstOffset = 2	0711.	
11	dstLength = 5 Compare dstBuffer using arrayCompare()	result of arrayCompare() is 00h.	
11	method	result of arrayCompare() is oon.	
	src = {AB, CD, EF, FE, DC}		
	<pre>srcOffset = 00 dest = dstBuffer</pre>		
	destOffset = 2		
40	length = 5		DIODI AV TEVT Des estiva
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		
	Successful call, dstBuffer is part of a buffer	result of	
	<pre>copyAdditionalInformation() dstBuffer.length = 7</pre>	copyAdditionalInformation() is	
	dstOffset = 0	05h.	
40	dstLength = 5	manufact array Comment () in CO	
13	Compare dstBuffer using arrayCompare() method	result of arrayCompare() is 00h.	
	src = {FE, DC, BA, 98, 76}		
	srcOffset = 00		
	<pre>dest = dstBuffer destOffset = 0</pre>		
	length = 5		

ld	Description	API Expectation	APDU Expectation
	Build and send a DISPLAY TEXT command	AFTEXPECTATION	
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		
	Successful call, dstBuffer is the whole buffer	result of	
	copyAdditionalInformation()	copyAdditionalInformation() is	
	dstBuffer.length = 9	07h.	
	dstOffset = 2	0711.	
	dstLength = 5		
15	Compare dstBuffer using arrayCompare()	result of arrayCompare() is 00h.	
13	method	result of arraycompare() is con.	
	method		
	[00 11 00 22 44]		
	src = {00, 11, 22, 33, 44}		
	srcOffset = 00		
	dest = dstBuffer		
	destOffset = 2		
10	length = 5		DIODI AV TEVT D
16	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
			command
	Terminal Response with F2h additional bytes		
	Result TLV = 03 81 F3 01 00 01 02 03		
	Successful call	result of	
	copyAdditionalInformation()	copyAdditionalInformation() is	
	dstBuffer.length = F2h		
	dstOffset = 0	F2h.	
	dstLength = F2h		
17	Compare dstBuffer using arrayCompare()	result of arrayCompare() is 00h.	
17	Compare usibulier using arrayCompare()	result of arrayCompare() is oon.	
	ana (00 01 02 02 04)		
	<pre>src = {00, 01, 02, 03, 04} srcOffset = 00</pre>		
	dest = dstBuffer		
	destOffset = 0		
40	length = F2h	D. It's FOL	
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		
	105410 11. 05 00 01 00 11 12 55 11		
	dott on ath > doto available	OUT OF THE BOUNDABLES	
	dstLength > data available	OUT_OF_TLV_BOUNDARIES	
	copyAdditionalInformation()	ToolkitException is thrown	
	<pre>dstBuffer.length = 6 dstOffset = 0</pre>		
	dstLength = 6		
20	Build and send a DISPLAY TEXT command		DISDLAY TEVE December 1
20	Dullu aliu seliu a DISPLAT TEXT COMMAND		DISPLAY TEXT Proactive
			command
1	Terminal Response with 5 additional bytes		
	Result TLV = 03 06 01 00 11 22 33 44		
	Initialize dstBuffer		
L	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	
1	method		
1	src = {		
1	00h, 01h, 02h, 03h, 04h,		
1	00h, 11h, 02h, 03h, 04h,		
	0Ah, 0Bh, 0Ch, 0Dh, 0Eh,		
1	0Fh, 10h, 11h, 12h, 13h}		
	<pre>srcOffset = 0 dogt datDuffor</pre>		
	dest = dstBuffer		
1	destOffset = 0		
	length = 20	1	1

ld	Description	API Expectation	APDU Expectation
21	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response with 2 Result TLV elements		
	1st Result TLV = 03 06 01 01 23 45 67 89 2nd Result TLV = 03 01 00		
	Successful call to copyAdditionalInformation() method dstBuffer.length = 5 dstOffset = 0 dstLength = 5	result of copyAdditionalInformation() is 05h.	
22	Compare dstBuffer using arrayCompare() method src = {01, 23, 45, 67, 89} srcOffset = 00 dest = dstBuffer destOffset = 0 length = 5	result of arrayCompare() is 00h.	
23	Call the getValueLength() method	Result is 06h.	
24	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response without Result Comprehension TLV	ToolkitException.UNAVAILABLE_ ELEMENT is thrown by send()	
	ProactiveResponseHandler, getTheHandler call copyAdditionalInformation()	ToolkitException.UNAVAILABLE_ ELEMENT is thrown	

5.2.5.2 Method copyTextString

Test Area Reference: Api_2_Prh_Cpts.

5.2.5.2.1 Conformance requirement

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

5.2.5.2.1.1 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).

5.2.5.2.1.2 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.

5.2.5.2.1.3 Context errors

• CRRC1: A ToolkitException.UNAVAILABLE_ELEMENT shall be thrown in case of unavailable Text String TLV element.

5.2.5.2.2 Test area files

Test Source: Test_Api_2_Prh_Cpts.java.

Test Applet: Api_2_Prh_Cpts_1.java.

Cap File: api_2_prh_cpts.cap.

5.2.5.2.3 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

5.2.5.2.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Build and send a GET INPUT command		GET INPUT Proactive
	qualifier = 00h		command
	dcs = 04h		
	<pre>buffer = 'Text' minRespLength = 00h</pre>		
	maxRespLength = FFh		
	Terminal Response		
	Terminal Nesponse		
	Text String TLV = 0D 02 04 41		
	ProactiveResponseHandler.getTheHandler();	NullPointerException is thrown	
	call the copyTextString() method with a null		
	dstBuffer		
	dstBuffer = null		
<u> </u>	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	
	copyTextString()	is thrown	
	dstBuffer.length = 04h		
	dstOffset = 02h		
3	dstOffset < 0	ArrayIndexOutOfBoundsException	
	copyTextString()	is thrown	
	dstBuffer.length = 04h		
_	dstOffset = -1		DIODI AV TEVT
4	Build and send a DISPLAY TEXT command		DISPLAY TEXT
	qualifier = 00h dcs = 04h		Proactive command
	buffer = 'Text'		
	Terminal Response without Text String TLV		
	ProactiveResponseHandler.getTheHandler();	UNAVAILABLE_ELEMENT	
	call the copyTextString() method	ToolkitException is thrown	
		·	

ld	Description	API Expectation	APDU Expectation
5	Build and send a GET INPUT command	AFT Expectation	GET INPUT Proactive
5	Build and Send a GLT INFOT Command		command
			Proactive
	Terminal Response with a null Text String TLV		1 TOACTIVE
	Terminal Response with a num Text String 1110		
	Text String TLV = 0D 00		
	Initialize dstBuffer		
	dstBuffer = {F00h, F01h, F02h, F03h}		
	Call the copyTextString() method	Result of copyTextString() is 02h	
	<pre>dstBuffer.length = 04h dstOffset = 02h</pre>		
6	Compare dstBuffer using arrayCompare()	Result of arrayCompare() is 00h	
	Compare dolbarrer doing array compare()	Troodit of diray compare() to com	
	src = {0F0h, 0F1h, 0F2h, 0F3h}		
	srcOffset = 00h		
	dest = dstBuffer		
	<pre>destOffset = 00h length = 04h</pre>		
7	Build and send a GET INPUT command		GET INPUT Proactive
'	Bana ana sena a ser na ser senanana		command
			Proactive
	Terminal Response with text length = 01h		110000110
	Text String TLV = 0D 02 04 41		
	Initialize dstBuffer		
	dstBuffer = {00h, 01h, 02h, 03h}		
	Call the copyTextString() method	Result of copyTextString() is 01h	
	dstBuffer.length = 04h		
	dstOffset = 00h		
8	Compare dstBuffer using arrayCompare()	Result of arrayCompare() is 00h	
	compare actions acting array comparety	integration array compane () to com	
	$src = \{41h, 01h, 02h, 03h\}$		
	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		
	<pre>Initialize dstBuffer dstBuffer = {00h, 01h, 02h, 03h}</pre>		
	Call the copyTextString() method	Result of copyTextString() is 04h	+
	oan the copy reatouring() method	Tresuit of copy reatouring() is 0411	
	dstBuffer.length = 04h		
	dstOffset = 02h		
10	Compare dstBuffer using arrayCompare()	Result of arrayCompare() is 00h	
	src = {00h, 01h, 42h, 43h}		
	src = {00n, 01n, 42n, 43n} srcOffset = 00h		
	dest = dstBuffer		
	destOffset = 00h		
	length = 04h		
11	Call the getValueLength() method	Result is 03h	
40	Duild and aged a OFT INDUT		OFT INDUIT Description
12	Build and send a GET INPUT command		GET INPUT Proactive
-	Torminal Paspansa with taxt langth - 75h		command
	Terminal Response with text length = 7Eh		
	Text String TLV = 0D 7F 04 01 02 7E		
	Initialize dstBuffer		
	dstBuffer = {00h, 00h 00h}		
	Call the copyTextString() method	Result of copyTextString() is 7Eh	
	dstBuffer.length = 7Eh		
1	dstOffset = 00h	1	i

ld	Description	API Expectation	APDU Expectation
13	Compare dstBuffer using arrayCompare()	Result of arrayCompare() is 00h	2 5 Exposition
. •		research array compare() to com	
	src = {01h,, 7Eh}		
	<pre>srcOffset = 00h dest = dstBuffer</pre>		
	destOffset = 00h		
	length = 7Eh		
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		
	Initialize dstBuffer		
	dstBuffer = {00h, 01h FFh}		
	Call the copyTextString() method	Result of copyTextString() is 8Fh	
	dstBuffer.length = FFh		
40	dstOffset = 10h	Described arms Or A 1 CC	
16	Compare dstBuffer using arrayCompare()	Result of arrayCompare() is 00h	
	src = {00h, 01h, 0Fh,		
	01h,7Fh, 8Fh, FFh}		
	<pre>srcOffset = 00h dest = dstBuffer</pre>		
	destOffset = 00h		
	length = FFh		
17	Build and send a GET INPUT command		GET INPUT Proactive command
	Terminal Response with text length = EFh		Command
	Text String TLV = 0D 81 F0 04 01 02 EF Initialize dstBuffer		
	dstBuffer = {00h, 00h 00h}		
	Call the copyTextString() method	Result of copyTextString() is EFh	
	dstBuffer.length = FFh		
	dstOffset = 00h		
18	Compare dstBuffer using arrayCompare()	Result of arrayCompare() is 00h	
	src = {01h,EFh, 00h 00h }		
	srcOffset = 00h		
	dest = dstBuffer		
	<pre>destOffset = 00h length = FFh</pre>		
19	Build and send a GET INPUT command	<u> </u>	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		
	Initialize dstBuffer		
	dstBuffer = {00h, 01h, 02h, 03h}	Deput of oper Total Office (A) to 0.41	
	Call the copyTextString() method	Result of copyTextString() is 04h	
	dstBuffer.length = 04h dstOffset = 02h		
20	Compare dstBuffer using arrayCompare()	Result of arrayCompare() is 00h	
	<pre>src = {00h, 01h, 42h, 43h} srcOffset = 00h</pre>		
	dest = dstBuffer		
	destOffset = 00h		
0.4	length = 04h	December 2001	
21	Call the getValueLength() method	Result is 03h	
	I .	İ	

5.2.5.3 Method getAdditionalInformationLength

Test Area Reference: Api_2_Prh_Gtil.

5.2.5.3.1 Conformance requirement

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

 $\label{lem:public_short} \mbox{public short getAdditionalInformationLength()} \\ \mbox{throws ToolkitException}$

5.2.5.3.1.1 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.

5.2.5.3.1.2 Parameter errors

No requirements.

5.2.5.3.1.3 Context errors

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

5.2.5.3.2 Test area files

Test Source: Test_Api_2_Prh_Gtil.java.

Test Applet: Api_2_Prh_Gtil_1.java.

Cap File: api_2_prh_gtil.cap.

5.2.5.3.3 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	

5.2.5.3.4 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	Result is 00h	
	the getAdditionalInformationLength() method		

ld	Description	API Expectation	APDU Expectation
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		- Communic
	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	Troodicio 0211	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	Describin 75h	
	ProactiveResponseHandler.getTheHandler(); call the getAdditionalInformationLength() method	Result is 7Fh	
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	D. W. COL	
	ProactiveResponseHandler.getTheHandler(); call the getAdditionalInformationLength() method	Result is 02h	
14	Call the getValueLength() method	Result is 03h	

ld	Description	API Expectation	APDU Expectation
15	Build and send a DISPLAY TEXT command		DISPLAY TEXT
			Proactive command
	Terminal Response without Result	ToolkitException.UNAVAILABLE_E	
	Comprehension TLV	LEMENT is thrown by send()	
	Get ProactiveResponseHandler		
	Call the getAdditionalInformationLength()	ToolkitException.UNAVAILABLE_E	
	method	LEMENT is thrown by	
		getAdditionalInformationLength ()	

5.2.5.4 Method getGeneralResult

Test Area Reference: Api_2_Prh_Gtgr.

5.2.5.4.1 Conformance requirement

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

5.2.5.4.1.1 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.

5.2.5.4.1.2 Parameter errors

No requirements.

5.2.5.4.1.3 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 Comprehension TLV.

5.2.5.4.2 Test area files

Test Source: Test_Api_2_Prh_Gtgr.java.

Test Applet: Api_2_Prh_Gtgr_1.java.

Cap File: api_2_prh_gtgr.cap.

5.2.5.4.3 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

5.2.5.4.4 Test procedure

do bu	Build and send a DISPLAY TEXT command pualifier = 00h cs = 04h puffer = 'Text' Terminal Response with General Result = 00 (command performed successfully) ProactiveResponseHandler.getTheHandler() Call the getGeneralResult() method Call the getValueLength() method Build and send a DISPLAY TEXT command Terminal Response with General Result = 01,	Result of getGeneralResult() is 00h Result is 01h	DISPLAY TEXT Proactive command
2	Terminal Response with General Result = 00 (command performed successfully) ProactiveResponseHandler.getTheHandler() Call the getGeneralResult() method Call the getValueLength() method Build and send a DISPLAY TEXT command Terminal Response with General Result = 01,	,	command
2	Terminal Response with General Result = 00 (command performed successfully) ProactiveResponseHandler.getTheHandler() Call the getGeneralResult() method Call the getValueLength() method Build and send a DISPLAY TEXT command Terminal Response with General Result = 01,	,	
2	Terminal Response with General Result = 00 (command performed successfully) ProactiveResponseHandler.getTheHandler() Call the getGeneralResult() method Call the getValueLength() method Build and send a DISPLAY TEXT command Terminal Response with General Result = 01,	,	
2	(command performed successfully) ProactiveResponseHandler.getTheHandler() Call the getGeneralResult() method Call the getValueLength() method Build and send a DISPLAY TEXT command Terminal Response with General Result = 01,	,	
2	Call the getGeneralResult() method Call the getValueLength() method Build and send a DISPLAY TEXT command Terminal Response with General Result = 01,	,	
	Call the getValueLength() method Build and send a DISPLAY TEXT command Terminal Response with General Result = 01,	Result is 01h	
	Build and send a DISPLAY TEXT command Terminal Response with General Result = 01,	Result is 01h	
3	Terminal Response with General Result = 01,		
			DISPLAY TEXT Proactive command
1			
	without Additional information on result		
	(command performed with partial comprehension)		
	ProactiveResponseHandler.getTheHandler()	Result of getGeneralResult() is 01h	
	Call the getGeneralResult() method	Trocain or gottomoral recently to o	
4	Call the getValueLength() method	Result is 01h	
5	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
	Terminal Response with General Result = 01,		command
	with Additional information on result		
	esult TLV = 03 02 01 55 (command		
	ProactiveResponseHandler.getTheHandler()	Result of getGeneralResult() is 01h	
		intesuit of getoeneralitesuit() is offi	
Ca	all the getGeneralResult() method		
6	Call the getValueLength() method	Result is 02h	
7	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
•			command
-			
	erminal Response with General Result = 02		
	esult TLV = 03 04 02 65 43 21 (Missing nformation)		
	ProactiveResponseHandler.getTheHandler()	Result of getGeneralResult() is 02h	
Ca	dall the getGeneralResult() method		
8	Call the getValueLength() method	Result is 04h	
0	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
9	Build allu Seliu a DISPLAT TEAT COIIIMAND		command
T	erminal Response with 7Fh additional bytes		
	esult TLV = 03 81 80 02 55 55 55	Popult is 02b	
	ProactiveResponseHandler.getTheHandler(); call the getGeneralResult() method	Result is 02h	
10	Call the getValueLength() method	Result is 80h	

ld	Description	API Expectation	APDU Expectation
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 Comprehension TLV		
	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 Comprehension TLV		
	ProactiveResponseHandler.getTheHandler(); call the getGeneralResult() method Result TLV = 03 00	OUT_OF_TLV_BOUNDARIES ToolkitException is thrown	

5.2.5.5 Method getItemIdentifier

Test Area Reference: Api_2_Prh_Gtii.

5.2.5.5.1 Conformance requirement

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

5.2.5.5.1.1 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.

5.2.5.5.1.2 Parameter errors

No requirements.

5.2.5.5.1.3 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 Comprehension TLV.

5.2.5.5.2 Test area files

Test Source: Test_Api_2_Prh_Gtii.java.

Test Applet: Api_2_Prh_Gtii_1.java.

Cap File: api_2_prh_gtii.cap.

5.2.5.5.3 Test coverage

CRR number	Test case number
N1	2, 4, 6, 8
N2	3, 5, 7, 9
C1	1
C2	10

5.2.5.5.4 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	UNAVAILABLE_ELEMENT	
	Identifier TLV	ToolkitException is thrown	
2	Build and send a SELECT ITEM command with	·	SELECT ITEM Proactive
	2 items (ID=01, 02)		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		SELECT ITEM Proactive
	3 items (ID=03, 05, 07)		command
	Terminal Response with Item 5 selected		
	Item Identifier TLV = 10 01 05		
	Call the getItemIdentifier() method	Result is 05h	
5	Call the getValueByte() method valueOffset = 00h	Result is 05h	
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 valueOffset = 00h	Result is FFh	
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	

ld	Description	API Expectation	APDU Expectation
9	Call the getValueByte() method	Result is FFh	
	valueOffset = 00h		
10	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive command
	Terminal Response without item identifier in the Item Identifier Comprehension TLV		
	Item Identifier TLV = 10 00		
	Call to getItemIdentifier()	OUT_OF_TLV_BOUNDARIES	
		ToolkitException is thrown	

5.2.5.6 Method getTextStringCodingScheme

Test Area Reference: Api_2_Prh_Gtcs.

5.2.5.6.1 Conformance requirement

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

5.2.5.6.1.1 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.

5.2.5.6.1.2 Parameter errors

No requirements.

5.2.5.6.1.3 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.

5.2.5.6.2 Test area files

Test Source: Test_Api_2_Prh_Gtcs.java.

Test Applet: Api_2_Prh_Gtcs_1.java.

Cap File: api_2_prh_gtcs.cap.

5.2.5.6.3 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

5.2.5.6.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Build and send a DISPLAY TEXT command		DISPLAY TEXT Proactive
	Terminal Response (no Text String TLV		command
	element available)		
	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
	Terminal Response with a null Text String TLV		
	·		
	Text String TLV = 0D 00		
	Call the getTextStringCodingScheme() method	ToolkitException is thrown	
3	Build and send a GET INPUT command	Toomac Zacopacit to arrown	GET INPUT Proactive
			command
	Terminal Response with text length = 01h, DCS = 04h		
	Text String TLV = 0D 02 04 "A"		
	Call 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 command
	Terminal Response with text length = 02h,		Command
	DCS = 00h		
	Text String TLV = 0D 03 00 "BB"		
	Call the getTextStringCodingScheme() method	Result is 00h	
6	Call the getValueLength() method	Result is 03h	
	oun me gerrundeengin(, memed	Treadily to Con-	
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() method	Result is 08h	
8	Call the getValueLength() method	Result is 7Fh	
<u>_</u>	B 111 - 1 - 0 - 1 - 0 - 1 - 1 - 1 - 1 - 1		OFT NIDUTE
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() method	Result is 04h	
10	Call the getValueLength() method	Result is 80h	
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		
		Result is 08h	
12	Call the getValueLength() method	Result is F0h	
	1		1

ld	Description	API Expectation	APDU Expectation
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		
	Call the getTextStringCodingScheme() method	Result is 04h	
14	Call the getValueLength() method	Result is 02h	

5.2.5.7 Method GetTextStringLength

Test Area Reference: Api_2_Prh_Gttl.

5.2.5.7.1 Conformance requirement

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

5.2.5.7.1.1 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.

5.2.5.7.1.2 Parameter errors

No requirements.

5.2.5.7.1.3 Context errors

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

5.2.5.7.2 Test area files

Test Source: Test_Api_2_Prh_Gttl.java.

Test Applet: Api_2_Prh_Gttl_1.java.

Cap File: api_2_prh_gttl.cap.

5.2.5.7.3 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	

5.2.5.7.4 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)		
	element available)		
	Call to getTextStringLength() with unavailable	UNAVAILABLE_ELEMENT	
	Text String TLV	ToolkitException is thrown	
2	Build and send a GET INPUT command	·	GET INPUT Proactive
			command
	Township of December 11 V		
	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	
	D 111-1-1-1-1-1-0FT 111-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		OFT INIBILITY
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	
3	Can the getvalueLength() method	Nesult 15 UZII	
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	
	Build and send a GET INPUT command		CET INDUE December 1
8	Dulia ana sena a GET INPUT COMMANA		GET INPUT Proactive command
			Command
	Terminal Response with text length = 7Eh,		
	DCS = 08h		
	Text String TLV = 0D 7F 08 01 02 7E	Decultie 75h	
	Call the getTextStringLength() method	Result is 7Eh	
9	Call the getValueLength() method	Result is 7Fh	
	3 g		
10	Build and send a GET INPUT command		GET INPUT Proactive
			command
	Torminal Doonense with tout length 751		
	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	

ld	Description	API Expectation	APDU Expectation
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	

5.2.5.8 Method getLength

Test Area Reference Api_2_Prh_Glen.

5.2.5.8.1 Conformance requirement

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

5.2.5.8.1.1 Normal execution

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

5.2.5.8.1.2 Parameter errors

No requirements.

5.2.5.8.1.3 Context errors

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

5.2.5.8.2 Test area files

Test Source: Test_Api_2_Prh_Glen.java.

Test Applet: Api_2_Prh_Glen_1.java.

Cap File: api_2_prh_glen.cap.

5.2.5.8.3 Test coverage

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

5.2.5.8.4 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		
	ProactiveResponseHandler.getTheHandler()		
	Call getLength() method	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()	Result of getLength() is FFh	
	Call getLength() method		

5.2.5.9 Method copy

Test Area Reference Api_2_Prh_Copy.

5.2.5.9.1 Conformance requirement

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

5.2.5.9.1.1 Normal execution

- CRRN1: copies the Comprehension TLV list contained in the handler to the destination byte array.
- CRRN2: returns dstOffset + dstLength.

5.2.5.9.1.2 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 Comprehension TLV List, an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException.OUT_OF_TLV_BOUNDARIES.

5.2.5.9.1.3 Context errors

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

5.2.5.9.2 Test area files

Test Source: Test_Api_2_Prh_Copy.java.

Test Applet: Api_2_Prh_Copy_1.java.

Cap File: api_2_prh_copy .cap.

5.2.5.9.3 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

5.2.5.9.4 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() copy() with NULL as parameter to dstBuffer	NullPointerException is thrown	
2	dstOffset > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	copy()	n is thrown	
	dstBuffer.length = 5		
	<pre>dstOffset = 6 dstLength = 0</pre>		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	copy()	In is thrown	
	dstBuffer.length = 5		
	dstOffset = -1		
	dstLength = 1	A many day day Out Of Day yarda Fara a sida	
4	dstLength > dstBuffer.length	ArrayIndexOutOfBoundsException is thrown	
	dstBuffer.length = 5	II 15 UIIOWII	
	dstOffset = 0		
	dstLength = 6		
5	dstOffset + dstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	copy()	n is thrown	
	<pre>dstBuffer.length = 5 dstOffset = 3</pre>		
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	copy()	n is thrown	
	dstBuffer.length = 5		
	<pre>dstOffset = 0 dstLength = -1</pre>		
7	dstLength > length of the Comprehension TLV	ToolkitException.OUT_OF_TLV_	
'	list	BOUNDARIES is thrown	
	copy()		
	dstBuffer.length = 13		
	dstOffset = 0		
0	dstLength = 13 Successful call, dstBuffer is the whole buffer	Result of copy() is 12	
8	copy()	Result of copy() is 12	
	dstBuffer.length = 12		
	dstOffset = 0		
<u></u>	dstLength = 12		
9	Compare the buffer with buffer:	Result of arrayCompare() is 0	
10	81 03 01 21 00 02 02 82 81 03 01 00 Successful call, dstBuffer is part of a buffer	Result of copy() is 15	
10	copy()	result of copy() is 15	
	dstBuffer.length = 20		
	dstOffset = 3		
	dstLength = 12		

ld	Description	API Expectation	APDU Expectation
11	Compare the whole buffer	Result of arrayCompare() is 0	
	Reference =		
	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	
	copy()		
	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		
	OC OD OE		
	OF 10 11 12 13		

5.2.5.10 Method findTLV

Test Area Reference Api_2_Prh_Find.

5.2.5.10.1 Conformance requirement

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

5.2.5.10.1.1 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.

5.2.5.10.1.2 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.

5.2.5.10.1.3 Context errors

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

5.2.5.10.2 Test area files

Test Source: Test_Api_2_Prh_Find.java.

Test Applet: Api_2_Prh_Find_1.java.

Cap File: api_2_prh_find.cap.

5.2.5.10.3 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

5.2.5.10.4 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_PA	
	occurrence = 0	RAMETER is thrown	
2	Search 1st TLV	Result is TLV_FOUND_CR_SET	
	findTLV()		
	tag = 01h		
2	occurrence = 1	Deput is 02h	
3	Call the getValueLength() method Search 2nd TLV	Result is 03h Result is TLV_FOUND_CR_SET	
4	findTLV()	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	
	findTLV()		
	tag = 04h		
7	occurrence = 1 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	findTLV()	Result is TEV_NOT_FOUND	
	tag = 01h		
	occurrence = 2		
9	Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
		ELEMENT shall be thrown.	
10	Search 3rd TLV	Result is	
	findTLV()	TLV_FOUND_CR_NOT_SET	
	tag = 03h occurrence = 1		
11	Call the getValueLength() method	Result is 01h	
' '	Jan in gottalaszongin() moniod	Treating of the	
12	Search 3rd TLV	Result is	
	findTLV()	TLV_FOUND_CR_NOT_SET	
	tag = 03h		
<u></u>	occurrence = 2		
13	Call the getValueLength() method	Result is 02h	

ld	Description	API Expectation	APDU Expectation
14	Search tag 83h	Result is	
	findTLV()	TLV FOUND CR NOT SET	
	Tag = 83h		
	Occurrence = 1		
15	Search tag 82h	Result is TLV_FOUND_CR_SET	
	findTLV()		
	Tag = 82h		
	Occurrence = 1		

5.2.5.11 Method getValueLength

Test Area Reference Api_2_Prh_Gvle.

5.2.5.11.1 Conformance requirement

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

5.2.5.11.1.1 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.

5.2.5.11.1.2 Parameter errors

No requirements.

5.2.5.11.1.3 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.

5.2.5.11.2 Test area files

Test Source: Test_Api_2_Prh_Gvle.java.

Test Applet: Api_2_Prh_Gvle_1.java.

Cap File: api_2_prh_gvle.cap.

5.2.5.11.3 Test coverage

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

5.2.5.11.4 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_	
	Call getValueLength() method	ELEMENT is thrown	
2	Search TLV 0Dh		
	Call getValueLength() method	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)		
	Call getValueLength() method	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)		
	Call getValueLength() method	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 7F		
	Search TLV 0Dh (Text String TLV)		
	Call getValueLength() method	Result is 80h	
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 EF		
	Search TLV 0Dh (Text String TLV)		
	Call getValueLength() method	Result is F0h	

5.2.5.12 Method getValueByte

Test Area Reference Api_2_Prh_Gvby.

5.2.5.12.1 Conformance requirement

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

5.2.5.12.1.1 Normal execution

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

5.2.5.12.1.2 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.

5.2.5.12.1.3 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.

5.2.5.12.2 Test area files

Test Source: Test_Api_2_Prh_Gvby.java.

Test Applet: Api_2_Prh_Gvby_1.java.

Cap File: api_2_prh_gvby.cap.

5.2.5.12.3 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

5.2.5.12.4 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()		
	Call getValueByte(0) method	ToolkitException.UNAVAILABLE_ ELEMENT is thrown	
2	Search TLV 01h (Command Details TLV)		
	Call getValueByte(3) method	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
3	Search TLV 01h (Command Details TLV)		
	Call getValueByte(2) method	Result is 00h (qualifier)	
4	Search TLV 02h (Device Identities TLV)		
	Call getValueByte(0) method	Result is 82h (Source)	
5	Search TLV 0Dh (Text String TLV)		
	Call getValueByte(7E) method	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)		
	Call getValueByte(7E) method	Result is 7Eh	
7	Call getValueByte(7F) method	Result is 7Fh	
8	Call getValueByte(EF) method	Result is EFh	

5.2.5.13 Method copyValue

Test Area Reference Api_2_Prh_Cpyvs_Bss.

5.2.5.13.1 Conformance requirement

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

5.2.5.13.1.1 Normal execution

- CRRN1: copies a part of the last TLV element which has been found, into a destination. buffer.
- CRRN2: returns dstOffset + dstLength.

5.2.5.13.1.2 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.

5.2.5.13.1.3 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.

5.2.5.13.2 Test area files

Test Source: Test_Api_2_Prh_Cpyv.java.

Test Applet: Api_2_Prh_Cpyv_1.java.

Cap File: api_2_prh_cpyv.cap.

5.2.5.13.3 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

5.2.5.13.4 Test procedure

Terminal Response, Text String length = 5 Taxt: String TLV = 00 80 = 01 02 = 05	ld	Description	API Expectation	APDU Expectation
Terminal Response, Text String length = 5 Text String TUV = 00 to 0	1		·	GET INPUT Proactive
ProactiveResponseHandler.getTheHandler() Select Text String TLV Call CopyValue() method with a null dstBuffer				command
ProactiveResponseHandler.getTheHandler() Select Text String TLV Call CopyValue() method with a null dstBuffer		Terminal Response, Text String length = 5		
Select Text String TUV				
Call copyValue() method with a null dstBuffer				
Substitute Sub		3		
2 dstOffset > dstBuffer.length detBuffer.length detBuffer.length detBuffer.length detBuffer.length detBuffer.length detBuffer.length detBuffer.length dstEngth dstOffset < 0 dstEngth dstOffset dstEngth dstBuffer.length dstBuffer.			NullPointerException is thrown	
copyValue () dstBuffer.length = 5 dstCffset = 6 dstLength = 0 dstEdfset = 1 dstEdfset = 0 dstEdfset = 0 dstEdfset = 0 dstEdfset = 0 dstEdfset = 3 dstEdfset = 1 dstEdf		with a null dstBuffer		
copyValue () dstBuffer.length = 5 dstCffset = 6 dstLength = 0 dstEdfset = 1 dstEdfset = 0 dstEdfset = 0 dstEdfset = 0 dstEdfset = 0 dstEdfset = 3 dstEdfset = 1 dstEdf				
dstEurgth = 0 3	2			
dstOffset = 6 dstLength = 0 3			n is thrown	
dstLength = 0 dstOffset < 0 ArrayIndexOutOfBoundsExceptio n is thrown dstBuffer Length = 5 dstLength = 1 dstLength = 1 dstLength = 5 dstLength = 6 dstOffset = 0 dstEngth = 5 dstLength = 6 dstOffset + dstLength = 5 dstLength = 6 dstOffset + dstLength = 5 dstLength = 5 dstLength = 5 dstOffset + dstLength = 5 dstLength = 3 dstLength = 3 dstLength = 3 dstLength = 1 dstOffset = 0 dstLength = 15 dstOffset = 0 dstLength = 10 dstEuffer Length = 15 dstOffset = 0 dstLength = 10 dstEuffer Length = 15 dstOffset = 0 dstLength = 10 dstEuffer Length = 15 dstOffset = 0 dstLength = 10 dstEungth = 15 dstOffset = 0 dstLength = 10 dstEungth = 15 dstOffset = 0 dstLength = 10 dstEungth = 15 dstOffset = 0 dstEungth = 15 dstEungth = 10 dstEungth = 15 dstEungth = 10 dstEungth = 15 dstEungth = 10 dstEungth = 10 dstEungth = 10 dstEungth = 15 dstEungth = 10 dstEungth = 10 dstEungth = 10 dstEungth = 10 dstEungth				
ArrayIndexOutOfBoundsException n is thrown				
copyValue () dstBuffer.length = 5 dstLength > dstBuffer.length copyValue () dstBuffer.length = 5 dstCoffset = 0 dstLength = 1 dstLength > dstBuffer.length copyValue () dstBuffer.length = 6 dstCoffset = 0 dstCopyValue () dstBuffer.length = 5 dstCoffset = 0 dstLength = 3 dstLength = 5 dstOffset = 0 dstLength = 5 dstOffset = 0 dstLength = 5 dstOffset = 0 dstLength = 15 dstOffset = 0 dstLength = 0 dstLength = 10 dstLength = 15 dstOffset = 0 dstLength = 15 dstOffset = 0 dstLength = 15 dstOffset = 0 dstLength = 1 dstOffset = 0 dstLength dstOffset = 0 dstLength	3	3	ArrayIndexOutOfBoundsExceptio	
dstEurfer.length = 5 dsvEoffset = -1 dstLength > 1 4				
detLength = 1 dstLength >dstLength >dstBuffer.length dstEurfer.length copyValue() dstEurfer.length = 5 dstOffset = 0 dstLength = 6 dstLength = 5 dstOffset = 3 dstLength = 5 dstOffset = 3 dstLength = 5 dstOffset = 3 dstLength = 5 dstDffset = 3 dstLength = 5 dstDffset = 0 dstLength = 5 dstDffset = 0 dstLength = 1 dstDffset = 7 dstDffset = 7 dstDffset = 7 dstDffset = 15 dstOffset = 0 dstLength = 15 dstOffset = 0 dstLength = 1 dstDffset = 0 dstLength = 15 dstOffset = 0 dstLength = 1 dstDffset = 0 dstDffse				
AstLength > dstLength SatBuffer.length CopyValue () dstBuffer.length Editorifset 0 dstLength 6 dstDiffset 0 dstLength 6 dstDiffset ds		dstOffset = -1		
copyValue() dstBuffer.length = 5 dstCoffset = 0 dstLength > dstBuffer.length copyValue() dstBuffer.length = 5 dstCoffset = 3 dstLength < 0 copyValue() dstBuffer.length = 5 dstCoffset = 0 dstLength > dstBuffer.length copyValue() dstBuffer.length = 5 dstCoffset = 0 dstLength < 0 copyValue() dstBuffer.length = 5 dstCoffset = 0 dstLength > ToolkitException.OUT_OF_TLV_ valueOffset = 7 dstBuffer.length = 15 dstCoffset = 0 dstLength = 0 8				
detBuffer.length = 5 dstOffset + dstLength > dstBuffer.length	4			
detCffset = 0 detLength = 6			n is thrown	
detLength = 6 dstOffset + dstLength > dstBuffer.length copyValue () detBuffer.length = 5 dstOffset = 3 detLength = 5 detLength = 5 detLength = 5 detLength = 5 dstOffset = 0 dstLength = 5 dstOffset = 0 dstLength = 1 ToolkitException.OUT_OF_TLV_BOUNDARIES is thrown				
Section				
copyValue() dstBuffer.length = 5 dstLength < 0 dstBuffer.length = 5 dstLength < 0 dstBuffer.length = 5 dstCopyValue() dstBuffer.length = 5 dstLength = 1 dstBuffer.length = 5 dstLength = 1 ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	5		ArrayIndexOutOfBoundsExceptio	
dstLength = 3 6				
dstLength = 3				
ArrayIndexOutOfBoundsException n is thrown				
copyValue() dstBuffer.length = 5 dstOffset = 0 dstLength = -1	-		A was do do vo stofD o un do E vo ontio	
dstDuffer length = 5 dstOffset = 0 dstLength = -1 7	6	l ————————————————————————————————————		
dstOffset = 0 dstLength = -1 7			n is thrown	
dstLength = -1				
ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown				
copyValue() valueOffset = 7 dstDuffer.length = 15 dstOffset = 0 dstLength = 0	7		ToolkitException.OUT OF TLV	
dstBuffer.length = 15 dstOffset = 0 dstLength = 0				
dstOffset = 0 dstLength = 0 8 valueOffset < 0 copyValue() valueOffset = -1 dstBuffer.length = 15 dstOffset = 0 dstLength = 1 9 dstLength > ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown				
dstLength = 0		1		
8				
copyValue() valueOffset = -1 dstBuffer.length = 15 dstOffset = 0 dstLength = 1 9	8		ToolkitException OLIT OF TLV	
valueOffset = -1 dstBuffer.length = 15 dstOffset = 0 dstLength > Text String length copyValue() valueOffset = 0 dstLength = 15 dstOffset = 0 dstLength = 7 ToolkitException.OUT_OF_TLV_BOUNDARIES is thrown 10 ValueOffset + dstLength > Text String length copyValue() ValueOffset = 2 DstBuffer.length = 15 DstOffset = 0 DstLength = 5 DstOffset = 0 DstLength = 5 11 Send a GET INPUT command GET INPUT Proactive command Certain Command Certain Ce				
dstOffset = 0 dstLength = 1 9			BOOND/ INIEO IS II II OWIT	
dstLength = 1 9		1		
9				
copyValue() valueOffset = 0 dstBuffer.length = 15 dstOffset = 0 dstLength = 7 10 ValueOffset + dstLength > Text String length copyValue() ValueOffset = 2 DstBuffer.length = 15 DstOffset = 0 DstLength = 5 11 Send a GET INPUT command Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler	-		ToolkitEveention OUT OF TIV	
valueOffset = 0 dstBuffer.length = 15 dstOffset = 0 dstLength = 7 10 ValueOffset + dstLength > Text String length copyValue() ValueOffset = 2 DstBuffer.length = 15 DstOffset = 0 DstLength = 5 11 Send a GET INPUT command Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler	١٩			
dstBuffer.length = 15 dstOffset = 0 dstLength = 7 10 ValueOffset + dstLength > Text String length copyValue() ValueOffset = 2 DstBuffer.length = 15 DstOffset = 0 DstLength = 5 11 Send a GET INPUT command Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler			BOUNDARIES IS UIIOWII	
dstLength = 7 10 ValueOffset + dstLength > Text String length copyValue() ValueOffset = 2 DstBuffer.length = 15 DstOffset = 0 DstLength = 5 11 Send a GET INPUT command Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler		dstBuffer.length = 15		
ToolkitException.OUT_OF_TLV_BOUNDARIES is thrown				
copyValue() ValueOffset = 2 DstBuffer.length = 15 DstOffset = 0 DstLength = 5 11 Send a GET INPUT command Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler	4.5		T 11/15 (1 OUT OF TO)	
ValueOffset = 2 DstBuffer.length = 15 DstOffset = 0 DstLength = 5 11 Send a GET INPUT command Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler	10			
DstBuffer.length = 15 DstOffset = 0 DstLength = 5 11 Send a GET INPUT command Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler		1 11	BOUNDARIES is thrown	
DstOffset = 0 DstLength = 5 11 Send a GET INPUT command Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler				
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				
Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler		DstLength = 5		
Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler				
Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler	11	Send a GET INPUT command		GET INPUT Proactive
Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler				command
ProactiveResponseHandler.getTheHandler				
call copyValue() method ToolkitException.UNAVAII ABLF				
		call copyValue() method	ToolkitException.UNAVAILABLE_	
ELEMENT is thrown			ELEMENT is thrown	

Description	API Expectation	APDU Expectation
Select Text String TLV		
Successful call	Result of copyValue() is 17	
copyValue()		
3		
J J	5 11 22	
•	Result is 00h	
Buffer = 04 00 01 0F		
Initialize dstBuffer		
dstBuffer = 55 55 55		
Successful call	Result of copyValue() is 15	
copyValue()		
ValueOffset = 2		
3		
7	B 1/1 001	
	Result is 00h	
	Select Text String TLV Successful call copyValue() ValueOffset = 0 DstBuffer.length = 17 DstOffset = 0 DstLength = 17 Compare buffer Buffer = 04 00 01 0F Initialize dstBuffer dstBuffer = 55 55 55 Successful call copyValue()	Select Text String TLV

5.2.5.14 Method compareValue

Test Area Reference Api_2_Prh_Cprv.

5.2.5.14.1 Conformance requirement

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

5.2.5.14.1.1 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 Comprehension TLV List is less than that in compareBuffer.
- CRRN3: returns 1 if the first miscomparing byte in Comprehension TLV List is greater than that in compareBuffer.

5.2.5.14.1.2 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.

5.2.5.14.1.3 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.

5.2.5.14.2 Test area files

Test Source: Test_Api_2_Prh_Cprv.java.

Test Applet: Api_2_Prh_Cprv_1.java.

Cap File: api_2_prh_cprv.cap.

5.2.5.14.3 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

5.2.5.14.4 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	<pre>compareOffset > compareBuffer.length compareValue() compareBuffer.length = 5 compareOffset = 6 compareLength = 0</pre>	ArrayIndexOutOfBoundsException is thrown	
3	<pre>compareOffset < 0 compareValue() compareBuffer.length = 5 compareOffset = -1 compareLength = 1</pre>	ArrayIndexOutOfBoundsException is thrown	
4	<pre>compareLength >compareBuffer.length compareValue() compareBuffer.length = 5 compareOffset = 0 compareLength = 6</pre>	ArrayIndexOutOfBoundsException is thrown	
5	compareOffset + compareLength >compareBuffer.length compareValue() compareBuffer.length = 5 compareOffset = 3 compareLength = 3	ArrayIndexOutOfBoundsException is thrown	
6	<pre>compareLength < 0 compareValue() compareBuffer.length = 5 compareOffset = 0 compareLength = -1</pre>	ArrayIndexOutOfBoundsException is thrown	

ld	Description	API Expectation	APDU Expectation
7	valueOffset > Text String Length	ToolkitException.OUT_OF_TLV_	7 a 2 c Expositation
	compareValue()	BOUNDARIES is thrown	
	valueOffset = 7	BOOTED WILLS TO WILLOW!!	
	compareBuffer.length = 15		
	compareOffset = 0		
<u></u>	compareLength = 0		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	compareValue()	BOUNDARIES is thrown	
	<pre>valueOffset = -1 compareBuffer.length = 15</pre>		
	compareOffset = 0		
	compareLength = 1		
9	compareLength > Text String length	ToolkitException.OUT_OF_TLV_	
	compareValue()	BOUNDARIES is thrown	
	valueOffset = 0		
	compareBuffer.length = 15		
	compareOffset = 0		
40	compareLength = 7	T 11 11 11 11 11 11 11 11 11 11 11 11 11	
10	valueOffset + compareLength > Text String	ToolkitException.OUT_OF_TLV_	
	length	BOUNDARIES is thrown	
	<pre>compareValue() valueOffset = 2</pre>		
	<pre>valueOffset = 2 compareBuffer.length = 15</pre>		
	compareOffset = 0		
	compareLength = 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()		
	call compareValue()method	ToolkitException.UNAVAILABLE_	
	oun companor anacymound	ELEMENT is thrown	
12	Select Text String TLV	EEEIMENT IO UNOWIT	
	Initialize compareBuffer		
	CompareBuffer =		
	04 00 01 0F		
	Compare buffers	Result is 00h	
	compareValue()		
	ValueOffset = 0		
	CompareOffset = 0		
42	CompareLength = 17		
13	Initialize compareBuffer		
	CompareBuffer = 04 00 01 10		
	Compare buffers with same parameters	Result is -1	
14	Initialize compareBuffer	TOOGIC IS	
'*	CompareBuffer =		
	03 00 01 0F		
	Compare buffers with same parameters	Result is +1	
15	Initialize 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	
	compareValue()	IVESUIT IS ONLY	
	ValueOffset = 2		
	CompareOffset = 3		
	CompareLength = 12		
16	Initialize 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	
	Joinpard Danielo With Saine parameters	TOSUIT IS	
	1		

ld	Description	API Expectation	APDU Expectation
17	Initialize 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	

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

Test Area Reference Api_2_Prh_Facyb_Bs.

5.2.5.15.1 Conformance requirement

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

5.2.5.15.1.1 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.

5.2.5.15.1.2 Parameter errors

- CRRP1: if dstBuffer is null NullPointerException shall be thrown.
- CRRP2: if dstOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

5.2.5.15.1.3 Context errors

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

5.2.5.15.2 Test area files

Test Source: Test_Api_2_Prh_Facyb_Bs.java.

Test Applet: Api_2_Prh_Facyb_Bs_1.java.

Cap File: api_2_prh_facyb_bs.cap.

5.2.5.15.3 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

5.2.5.15.4 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()		
	call findAndCopyValue() method with a null dstBuffer	NullPointerException is thrown	
2	<pre>dstOffset > dstBuffer.length findAndCopyValue() tag = 0Dh dstBuffer.length = 20 dstOffset = 21</pre>	ArrayIndexOutOfBoundsException is thrown	
3	<pre>dstOffset < 0 findAndCopyValue() dstBuffer.length = 20 dstOffset = -1</pre>	ArrayIndexOutOfBoundsException is thrown	
4	<pre>length > dstBuffer.length findAndCopyValue() dstBuffer.length = 15 dstOffset = 0</pre>	ArrayIndexOutOfBoundsExceptio n is thrown	
5	<pre>dstOffset + length >dstBuffer.length findAndCopyValue() dstBuffer.length = 20 dstOffset = 5</pre>	ArrayIndexOutOfBoundsException 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()	ToolkitException.UNAVAILABLE_	
	tag = 04h	ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE_ ELEMENT is thrown.	
7	Successful call findAndCopyValue() Tag = 0Dh DstBuffer.length = 17 DstOffset = 0	Result of findAndcopyValue() is 17	
8	Compare buffer Buffer = 04 00 01 0F	Result is 00h	
9	Initialize dstBuffer dstBuffer = 55 55 55		
	Successful call findAndCopyValue() DstBuffer.length = 20 DstOffset = 2	Result of findAndcopyValue() is 19	

ld	Description	API Expectation	APDU Expectation
10	Compare buffer	Result is 00h	
	Buffer =		
	55 55 04 00 01		
	02 03 04 05 06		
	07 08 09 0A 0B		
	OC OD OE OF 55		
11	Send a GET INPUT command		GET INPUT Proactive command
	Terminal Response, with 2 Text String TLV		
	OD 11 04 00 01 OF		
	OD 02 04 41		
	ProactiveResponseHandler.getTheHandler()		
	Successful call	Result of findAndcopyValue() is	
	<pre>findAndCopyValue()</pre>	17	
	Tag = 0Dh		
	DstBuffer.length = 17		
	DstOffset = 0		
12	Compare buffer	Result is 00h	
	Buffer = 04 00 01 0F		
13	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	
	findAndCopyValue()	17	
	Tag = 8Dh		
	DstBuffer.length = 17		
L.,	DstOffset = 0		
14	Compare buffer	Result is 00h	
	Buffer = 04 00 01 0F		

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

Test Area Reference Api_2_Prh_Facybbs_Bss.

5.2.5.16.1 Conformance requirement

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

5.2.5.16.1.1 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.

5.2.5.16.1.2 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.
- 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.

5.2.5.16.1.3 Context errors

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

5.2.5.16.2 Test area files

Test Source: Test_Api_2_Prh_Facybbs_Bss.java.

Test Applet: Api_2_Prh_Facybbs_Bss_1.java.

Cap File: api_2_prh_facybbs_bss.cap.

5.2.5.16.3 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
P4	22
C1	Does not apply for Proactive Response Handler

5.2.5.16.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Send a GET INPUT command		GET INPUT Proactive
-			command
	Terminal Response, Text String length = 15		l
	Text String TLV = 0D 10 04 01 02 0F		
	ProactiveResponseHandler.getTheHandler()		
	findAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	dstOffset > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	tag = 0Dh, occurrence = 1		
	valueOffset = 0		
	dstBuffer.length = 5		
	dstOffset = 6		
	dstLength = 0		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = -1		
	dstLength = 1		

ld	Description	API Expectation	APDU Expectation
4	dstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	Al Do Expectation
-	findAndCopyValue()	n is thrown	
	dstBuffer.length = 5	in io unown	
	dstOffset = 0		
	dstLength = 6	A 1 1 0 (O/D 1 5);	
5	<pre>dstOffset + dstLength > dstBuffer.length findAndCopyValue()</pre>	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 3		
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	<pre>findAndCopyValue() dstBuffer.length = 5</pre>	n is thrown	
	dstOffset = 0		
	dstLength = -1		
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()		
	valueOffset > Text String Length	ToolkitException.OUT_OF_TLV_	
	findAndCopyValue()	BOUNDARIES is thrown	
	tag = 0Dh, occurrence = 1		
	valueOffset = 7		
	<pre>dstBuffer.length = 15 dstOffset = 0</pre>		
	dstOffset = 0 dstLength = 0		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	findAndCopyValue()	BOUNDARIES is thrown	
	valueOffset = -1		
	<pre>dstBuffer.length = 15 dstOffset = 0</pre>		
	dstLength = 1		
9	dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
	findAndCopyValue()	BOUNDARIES is thrown	
	<pre>valueOffset = 0 dstBuffer.length = 15</pre>		
	dstBuller.length = 15 dstOffset = 0		
	dstLength = 7		
10	valueOffset + dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
	<pre>findAndCopyValue() valueOffset = 2</pre>	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 5		
4.	Cond o CET INDUT		OFT INDUTED
11	Send a GET INPUT command		GET INPUT Proactive command
	Terminal Response, Text String length = 16		Communic
	Text String TLV = 0D 11 04 00 01 0F		
	ProactiveResponseHandler.getTheHandler()		
	Select a TLV (tag 02h)		
	findAndCopyValue()	ToolkitException.UNAVAILABLE_	
	tag = 0Dh occurrence = 2	ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE_ ELEMENT is thrown.	
12	Successful call	Result of findAndCopyValue() is	
	findAndCopyValue()	17	
	Tag = 0Dh, occurrence = 1		
	<pre>ValueOffset = 0 DstBuffer.length = 17</pre>		
	DstOffset = 0		
	DstLength = 17		
13	Compare buffer	Result is 00h	
	Buffer = 04 00 01 0F		

ld	Description	API Expectation	APDU Expectation
14	Initialize dstBuffer	74 1 Exposition	711 DO EXPOSITATION
' '	dstBuffer = 55 55 55		
	Successful call	Result of findAndcopyValue() is	
	findAndCopyValue()	15	
	Tag = 0Dh, occurrence = 1		
	ValueOffset = 2		
	DstBuffer.length = 20		
	DstOffset = 3 DstLength = 12		
15	Compare buffer	Result is 00h	
15	Buffer =	Result is our	
	03 04 05 06 07		
	08 09 0A 0B 0C		
	55 55 55 55		
16	Send a GET INPUT command		GET INPUT Proactive
			command
	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 findAndCopyValue()	Result of findAndCopyValue() is	
	Tag = 0Dh, occurrence = 1	17	
	ValueOffset = 0		
	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 6	
	findAndCopyValue()		
	<pre>Tag = 0Dh, occurrence = 2 ValueOffset = 0</pre>		
	DstBuffer.length = 6		
	DstOffset = 0		
	DstLength = 6		
19	Compare buffer	Result is 00h	
	Buffer = 00 11 22 33 44 55		
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	
	findAndCopyValue()	17	
	<pre>Tag = 8Dh, occurrence = 1 ValueOffset = 0</pre>		
	DstBuffer.length = 17		
	DstOffset = 0		
	DstLength = 17		
21	Compare buffer	Result is 00h	
	Buffer = 04 00 01 0F		
22	Invalid parameter	ToolkitException.BAD_INPUT_PA	
	findAndCopyValue()	RAMETER is thrown	
	occurrence = 0		

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

Test Area Reference Api_2_Prh_Facrb_Bs.

5.2.5.17.1 Conformance requirement

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

5.2.5.17.1.1 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 Comprehension TLV is less than that in compareBuffer returns -1.
- CRRN5: if the first miscomparing byte in Comprehension TLV is greater than that in compareBuffer returns 1.
- CRRN6: The search method is comprehension required flag independent.

5.2.5.17.1.2 Parameter errors

- CRRP1: if compareBuffer is null NullPointerException shall be thrown.
- CRRP2: if compareOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

5.2.5.17.1.3 Context errors

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

5.2.5.17.2 Test area files

Test Source: Test_Api_2_Prh_Facrb_Bs.java.

Test Applet: Api_2_Prh_Facrb_Bs_1.java.

Cap File: api_2_prh_facrb_bs.cap.

5.2.5.17.3 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

5.2.5.17.4 Test procedure

Terminal Response, Text String length = 15 Text String TLV = 0D 10 04 01 02 0P	ld	Description	API Expectation	APDU Expectation
Text String TiV = 0D 10 40 10 2 0F	1	Send a GET INPUT command		GET INPUT Proactive command
ProactiveResponseHandler.getTheHandler() FindAndCompareValue() with a null dstBuffer NullPointerException is thrown		Terminal Response, Text String length = 15		
FindAndCompareValue() with a null dstBuffer compareOffset > compareBuffer.length findAndCompareValue() tag = 0Dh compareDeffset = 21 compareOffset < 0 findAndCompareValue() n is thrown compareDeffset = 21 compareOffset < 0 findAndCompareValue() n is thrown compareDeffset = 21 compareOffset < 0 findAndCompareValue() compareBuffer.length findAndCompareValue() n is thrown compareDeffset = 10 compareDef				
CompareOffset > compareBuffer.length findAndCompareValue()				
findAndCompareValue () cag = 0Dh compareBuffer, length = 20 compareOffset = 21		FindAndCompareValue() with a null dstBuffer	NullPointerException is thrown	
findAndCompareValue()	2	<pre>findAndCompareValue() tag = 0Dh compareBuffer.length = 20</pre>	n is thrown	
findAndCompareValue() compareBuffer.length = 15 CompareOffset + length > compareBuffer.length findAndCompareValue() CompareOffset = 5 6 Send a GET INPUT command Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler() Select a TLV (tag 02h) findAndCompareValue() tag = 04h Call the getValueLength() method ToolkitException.UNAVAILABLE_ELEMENT is thrown. Call the getValueLength() method CompareBuffer = 04 00 01 0F Result is 00h Tag = 0Dh CompareOffset = 0 8 Verify current TLV Call getValueLength() method Initialize compareBuffer CompareOffset = 0 Nesult is 17 CompareOffset = 0 Result is 17 CompareOffer = 04 00 01 10 Initialize compareBuffer CompareOffset = 0 Result is 17	3	<pre>findAndCompareValue() compareBuffer.length = 20 compareOffset = -1</pre>	n is thrown	
compareBuffer.length findAndCompareValue() CompareBuffer.length = 20 CompareOffset = 5 6 Send a GET INPUT command Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler() Select a TLV (tag 02h) findAndCompareValue() tag = 04h Call the getValueLength() method ToolkitException.UNAVAILABLE_ELEMENT is thrown Call the getValueLength() method ToolkitException.UNAVAILABLE_ELEMENT is thrown. Result is 00h CompareBuffer = 04 00 01 0F Compare buffers findAndCompareValue() Tag = 0Dh CompareOffset = 0 Verify current TLV Call getValueLength() method Result is 17 Result is 17	4	<pre>findAndCompareValue() compareBuffer.length = 15 compareOffset = 0</pre>	n is thrown	
Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler() Select a TLV (tag 02h) findAndCompareValue() tag = 04h Call the getValueLength() method ToolkitException.UNAVAILABLE_ ELEMENT is thrown ToolkitException.UNAVAILABLE_ ELEMENT is thrown ToolkitException.UNAVAILABLE_ ELEMENT is thrown. Result is 00h Tag = 0Dh Compare buffers findAndCompareValue() Tag = 0Dh CompareOffset = 0 Verify current TLV Call getValueLength() method Initialize compareBuffer CompareBuffer = 04 00 01 10	5	<pre>compareBuffer.length findAndCompareValue() CompareBuffer.length = 20</pre>		
Text String TLV = 0D 11 04 00 01 0F ProactiveResponseHandler.getTheHandler() Select a TLV (tag 02h) findAndCompareValue() tag = 04h Call the getValueLength() method ToolkitException.UNAVAILABLE_ELEMENT is thrown ToolkitException.UNAVAILABLE_ELEMENT is thrown. Initialize compareBuffer CompareBuffer = 04 00 01 0F Compare buffers findAndCompareValue() Tag = 0Dh CompareOffset = 0 Verify current TLV Call getValueLength() method Initialize compareBuffer CompareBuffer = 04 00 01 10	6	Send a GET INPUT command		
ProactiveResponseHandler.getTheHandler() Select a TLV (tag 02h) findAndCompareValue() tag = 04h Call the getValueLength() method Initialize compareBuffer CompareBuffer = 04 00 01 0F CompareObject = 0 8 Verify current TLV Call getValueLength() method 8 Verify current TLV Call getValueLength() method 9 Initialize compareBuffer CompareBuffer = 04 00 01 10		Terminal Response, Text String length = 16		
Select a TLV (tag 02h) findAndCompareValue() tag = 04h Call the getValueLength() method ToolkitException.UNAVAILABLE ELEMENT is thrown ToolkitException.UNAVAILABLE ELEMENT is thrown. ToolkitException.UNAVAILABLE ELEMENT is thrown. ToolkitException.UNAVAILABLE ELEMENT is thrown. Result is 00h findAndCompareBuffer = 0h CompareOffset = 0 Verify current TLV Call getValueLength() method Initialize compareBuffer CompareBuffer = 04 00 01 10		Text String TLV = 0D 11 04 00 01 0F		
findAndCompareValue() tag = 04h Call the getValueLength() method ToolkitException.UNAVAILABLE_ ELEMENT is thrown ToolkitException.UNAVAILABLE_ ELEMENT is thrown. 7		ProactiveResponseHandler.getTheHandler()		
findAndCompareValue() tag = 04h Call the getValueLength() method ToolkitException.UNAVAILABLE_ ELEMENT is thrown ToolkitException.UNAVAILABLE_ ELEMENT is thrown. 7		Select a TLV (tag 02h)		
tag = 04h Call the getValueLength() method ToolkitException.UNAVAILABLE_ ELEMENT is thrown. Initialize compareBuffer CompareBuffer = 04 00 01 0F Compare buffers findAndCompareValue() Tag = 0Dh CompareOffset = 0 Verify current TLV Call getValueLength() method Initialize compareBuffer CompareBuffer = 04 00 01 10			ToolkitException.UNAVAILABLE	
Call the getValueLength() method ToolkitException.UNAVAILABLE_ ELEMENT is thrown. Initialize compareBuffer CompareBuffer = 04 00 01 0F Compare buffers findAndCompareValue() Tag = 0Dh CompareOffset = 0 Verify current TLV Call getValueLength() method Initialize compareBuffer CompareBuffer = 04 00 01 10				
7		Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
findAndCompareValue() Tag = 0Dh CompareOffset = 0 8	7	CompareBuffer = 04 00 01 0F		
Call getValueLength() method 9		<pre>findAndCompareValue() Tag = 0Dh</pre>	Result is 00h	
CompareBuffer = 04 00 01 10	8	Call getValueLength() method	Result is 17	
Compare buffers with same parameters Result is -1	9	CompareBuffer =		
			Result is -1	

ld	Description	API Expectation	APDU Expectation
10	Initialize compareBuffer		
	CompareBuffer =		
	03 00 01 0F		
	Compare buffers with same parameters	Result is +1	
4.4	Initializa compara Duffer		
11	Initialize compareBuffer CompareBuffer =		
	02 03 04 05 06		
	07 08 09 0A 0B		
	OC OD OE OF 55	DIt i- 00b	
	Compare buffers findAndCompareValue()	Result is 00h	
	CompareOffset = 2		
12	Send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response, with 2 Text String TLV		
	0D 11 04 00 01 0F		
	OD 06 00 11 22 33 44 55		
	ProactiveResponseHandler.getTheHandler()		
	Initialize compareBuffer CompareBuffer =		
	55 55 04 00 01		
	02 03 04 05 06		
	07 08 09 0A 0B		
	OC OD OE OF 55		
	Compare buffers findAndCompareValue()	Result is 00h	
	CompareOffset = 2		
13	Initialize 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	
	findAndCompareValue()		
14	CompareOffset = 2 Initialize compareBuffer		
14	CompareBuffer =		
	55 55 04 00 01		
	02 03 04 05 06		
	07 08 09 0A 0B		
	OC 0D 0D 10 55 Compare buffers	Result is +1	
	findAndCompareValue()	INCOULT IS TI	
	CompareOffset = 2		
15	Send a GET INPUT command		GET INPUT Proactive
	Torminal Decorate Tout China Laurth 40		command
	Terminal Response, Text String length = 16 Text String TLV = 0D 11 04 00 01 0F		
	ProactiveResponseHandler.getTheHandler()		
	Initialize compareBuffer		
	CompareBuffer =		
	04 00 01 OF		
	Compare buffers (with tag 8Dh)	Result is 00h	
	findAndCompareValue()		
	Tag = 8Dh		
	CompareOffset = 0		

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

 $Test\ Area\ Reference\ Api_2_Prh_Facrbbs_Bss.$

5.2.5.18.1 Conformance requirement

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

5.2.5.18.1.1 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 Comprehension TLV is less than that in compareBuffer -1 is returned.
- CRRN5: if the first miscomparing byte in Comprehension TLV is greater than that in compareBuffer 1 is returned.
- CRRN6: The search method is comprehension required flag independent.

5.2.5.18.1.2 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.

5.2.5.18.1.3 Context errors

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

5.2.5.18.2 Test area files

Test Source: Test_Api_2_Prh_Facrbbs_Bss.java.

Test Applet: Api_2_Prh_Facrbbs_Bss_1.java.

Cap File: api_2_prh_facrbbs_bss.cap.

5.2.5.18.3 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

5.2.5.18.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Send a GET INPUT command	AFTEXPECTATION	GET INPUT Proactive
1	Send a GET INPUT command		
		<u> </u>	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		
_	a a manage Official a common Duffer I am with	A da da O (Of Da da F a f	
2	compareOffset > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>findAndCompareValue() tag = 0Dh, occurrence = 1</pre>	n is thrown	
	valueOffset = 0		
	compareBuffer.length = 5		
	compareOffset = 6		
	compareLength = 0		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
3	findAndCompareValue()	n is thrown	
	compareBuffer.length = 5	n is thrown	
	compareOffset = -1		
	compareLength = 1		
4	compareLength >compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
7	findAndCompareValue()	n is thrown	
	compareBuffer.length = 5	II IS UIIOWII	
	compareOffset = 0		
	compareLength = 6		
5	CompareOffset + compareLength	ArrayIndexOutOfBoundsExceptio	
	>compareBuffer.length	n is thrown	
	findAndCompareValue()		
	CompareBuffer.length = 5		
	CompareOffset = 3		
	CompareLength = 3		
6	compareLength < 0	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	compareBuffer.length = 5		
	compareOffset = 0		
	compareLength = -1		
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()		
	valueOffset ≥ Text String Length	ToolkitException.OUT_OF_TLV_	
	findAndCompareValue()	BOUNDARIES is thrown	
	tag = 0Dh, occurrence = 1		
	valueOffset = 7		
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 0		

ld	Description	API Expectation	APDU Expectation
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	findAndCompareValue()	BOUNDARIES is thrown	
	valueOffset = -1		
	<pre>compareBuffer.length = 15 compareOffset = 0</pre>		
	compareLength = 1		
9	compareLength > Text String length	ToolkitException.OUT_OF_TLV_	
	findAndCompareValue()	BOUNDARIES is thrown	
	<pre>valueOffset = 0 compareBuffer.length = 15</pre>		
	compareOffset = 0		
	compareLength = 7		
10	valueOffset + compareLength > Text String	ToolkitException.OUT_OF_TLV_	
	length	BOUNDARIES is thrown	
	<pre>findAndCompareValue() valueOffset = 2</pre>		
	compareBuffer.length = 15		
	compareOffset = 0		
44	compareLength = 5	Tablide Committee DAD INDUT DA	
11	Invalid parameter findAndCompareValue()	ToolkitException.BAD_INPUT_PA RAMETER is thrown	
	Occurrence = 0	NAME LEK 15 MIOWII	
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)		
	findAndCompareValue()	ToolkitException.UNAVAILABLE_	
	tag = 0Dh	ELEMENT is thrown	
	occurrence = 2		
	Call the getValueLength() method	ToolkitException.UNAVAILABLE_ ELEMENT is thrown.	
13	Initialize compareBuffer		
	CompareBuffer =		
	04 00 01 0F findAndCompareValue()	Result is 00h	
	tag = 0Dh, occurrence = 1	Tresdit is som	
	valueOffset = 0		
	<pre>compareOffset = 0 compareLength = 17</pre>		
	Comparedengen = 17		
14	Verify current TLV	Result is 17	
45	Call getValueLength() method		
15	Initialize compareBuffer compareBuffer =		
L	04 00 01 10		
	Compare buffers with same parameters	Result is -1	
16	Initialize compareBuffer		
	compareBuffer = 03 00 01 0F		
	Compare buffers with same parameters	Result is +1	
17	Initialize 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	
	<pre>findAndCompareValue() valueOffset = 2</pre>		
	compareOffset = 3		
	compareLength = 12		
18	Initialize 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	

ld	Description	API Expectation	APDU Expectation
19	Initialize compareBuffer	ATTEXPOOLATION	Ai Do Expediation
19	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	
20	Send a GET INPUT command		GET INPUT Proactive
			command
	Terminal Response, with 2 Text String TLV		
	OD 11 04 00 01 OF		
	0D 06 00 11 22 33 44 55		
	ProactiveResponseHandler.getTheHandler()		
	Initialize compareBuffer		
	compareBuffer =		
	04 00 01 OF		
	findAndCompareValue()	Result is 00h	
	tag = 0Dh, occurrence = 1		
	valueOffset = 0		
	compareOffset = 0		
	compareLength = 17		
21	Initialize compareBuffer		
	compareBuffer =		
	00 11 22 33 44 55	D tri ool	
	findAndCompareValue()	Result is 00h	
	<pre>tag = 0Dh, occurrence = 2 valueOffset = 0</pre>		
	compareOffset = 0		
	compareLength = 6		
	0		
22	Initialize compareBuffer		
	compareBuffer =		
	00 11 22 33 44 66		
	findAndCompareValue()	Result is -1	
	tag = 0Dh, occurrence = 2		
	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()		
	Initialize compareBuffer		
	CompareBuffer =		
	04 00 01 0F		
	Compare buffers (with tag 8Dh)	Result is 00h	
	findAndCompareValue()		
	tag = 8Dh, occurrence = 1		
	valueOffset = 0		
	<pre>compareOffset = 0 compareLength = 17</pre>		
	comparenendin = 1/		

5.2.5.19 Method getCapacity

Test Area Reference: Api_2_Prh_Gcap.

5.2.5.19.1 Conformance requirement

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

public byte getCapacity()

5.2.5.19.1.1 Normal execution

• CRRN1: The method shall return the maximum size of the Comprehension TLV list managed by the handler.

5.2.5.20.1.2 Parameter errors

No requirements.

5.2.5.20.1.3 Context errors

No requirements.

5.2.5.19.2 Test area files

Test Source: Test_Api_2_Prh_Gcap.java.

Test Applet: Api_2_Prh_Gcap_1.java.

Cap File: api_2_prh_gcap.cap.

5.2.5.19.3 Test coverage

CRR number	Test case number
N1	1

5.2.5.19.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	ProactiveResponseHandler available		
	1- Send envelope Menu Selection 2- The applet sends a proactive command 3- Fetch the proactive command and send Terminal Response 4- The applet calls qetCapacity() method		2- 91 XX 3- The proactive command is fetched
	5- The applet calls getLength() method	4-No exception is thrown 5- The Capacity result is greater or equal to getLength() result	

5.2.5.20 Method getChannelldentifier

Test Area Reference: Api_2_Prh_Gcid.

5.2.5.20.1 Conformance requirement

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

5.2.5.201.1.1 Normal execution

- CRRN1:The method shall return the channel identifier byte value.
- CRRN2:The channel identifier byte value returned shall be from the first Channel status TLV element.
- CRRN3: If the element is available it becomes the currently selected TLV.

5.2.5.20.1.2 Parameter errors

No requirements.

5.2.5.20.1.3 Context errors

• CRRC1: The method shall throw ToolkitException.UNAVAILABLE_ELEMENT if the Channel status TLV is not present.

• CRRC2: The method shall throw ToolkitException.OUT_OF_TLV_BOUNDARIES if the Comprehension TLV Channel Status length is equal to 0.

5.2.5.20.2 Test area files

Test Source: Test_Api_2_Prh_Gcid.java.

Test Applet: Api_2_Prh_Gcid_1.java.

Cap File: api_2_prh_gcid.cap.

5.2.5.21.3 Test coverage

CRR number	Test case number
N1	3
N2	4
N3	5
C1	1
C2	2

5.2.5.20.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Applet1 is installed with maximum number		
	of channel = 01.		
1	Channel status TLV is not present 1- Build and send a DISPLAY TEXT command		1- DISPLAY TEXT Proactive command is fetched.
	<pre>2- Call ProactiveResponseHandler.getChannelIdentif ier() method.</pre>	2- UNAVAILABLE_ELEMENT ToolkitException is thrown	TERMINAL RESPONSE with no Channel status TLV available.
2	Channel status TLV with a length equal to 0	·	1- OPEN CHANNEL
	1- Build and send a OPEN CHANNEL proactive command		Proactive command is fetched.
	2- Call ProactiveResponseHandler.getChannelIdentif ier() method.	2- OUT_OF_TLV_BOUNDARIES ToolkitException is thrown	TERMINAL RESPONSE with Channel status TLV length equal to 0.
3	Get channel identifier value	2- Returns 0x01	1- OPEN CHANNEL
	1- Call ProactiveHandler.init() method to open a channel and ProactiveHandler.send() method 2- Call ProactiveResponseHandler.getChannelIdentifier() method. 3- Call ProactiveHandler.initCloseChannel() and ProactiveHandler.send() methods.		Proactive Command is fetched. TERMINAL RESPONSE is issued with channel status value = 0x8100.
4	Get channel identifier value with 2 TLV 1- Call ProactiveHandler.init() method to	2- Returns 0x01	1- OPEN CHANNEL Proactive Command is
	<pre>open a channel and ProactiveHandler.send() method 2- Call ProactiveResponseHandler.getChannelIdentif ier() 3- Call</pre>		fetched. TERMINAL RESPONSE is issued with channel status value = 0x8100 and 0x8200.
	ProactiveHandler.initCloseChannel() and ProactiveHandler.send() methods.		

ld	Description	API Expectation	APDU Expectation
5	Channel status TLV is currently selected TLV	2- Returns 0x03	1- OPEN CHANNEL
	1- Call ProactiveHandler.init() method to open a channel and ProactiveHandler.send()		Proactive Command is fetched.
	method. Call ViewHandler.FindTLV() method with Device Identity Tag.		TERMINAL RESPONSE is issued with channel status value = 0x0305.
	2- Call		
	<pre>ProactiveResponseHandler.getChannelIdentif ier() method.</pre>		
	3- Compare		
	ProactiveResponseHandler.getChannelIdentifier() and ViewHandler.getValueByte(0) method results.		

5.2.5.21 Method copyChannelData

Test Area Reference: Api_2_Prh_Cchd.

5.2.5.21.1 Conformance requirement

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

5.2.5.21.1.1 Normal execution

- CRRN1: The method shall copy a part of the Channel data string field.
- CRRN2: The Channel data string field value returned shall be the first Channel data TLV element of the current response data field.
- CRRN3: If the element is available it becomes the currenly selected TLV.
- CRRN4: Returns dstOffset + dstLength.

5.2.5.21.1.2 Parameter errors

- CRRP1: If dstBuffer is null, a NullPointerException is thrown.
- CRRP2: 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.
- CRRP4: If dstLength is greater than the value field of the available TLV, a OUT_OF_TLV_BOUNDARIES ToolkitException is thrown.

5.2.5.21.1.3 Context errors

CRRC1: The method shall throw a UNAVAILABLE_ELEMENT ToolkitException if the Result TLV is not
present.

5.2.5.21.2 Test area files

 $Test\ Source: \qquad Test_Api_2_Prh_Cchd.java.$

Test Applet: Api_2_Prh_Cchd_1.java.

Cap File: api_2_prh_cchd.cap.

5.2.5.21.3 Test coverage

CRR number	Test case number
N1	7, 10, 12, 14
N2	14
N3	9
N4	8, 11, 13, 15
P1	1
P2	2, 3
P3	4
P4	5
C1	6

5.2.5.21.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	1- Applet1 is installed with maximum		2- OPEN CHANNEL
	number of channel = 01.		proactive command is
			fetched
	2- Applet1 builds proactive commands OPEN		
	CHANNEL with init() method in order to		TERMINAL RESPONSE is
	open one channel. ProactiveHandler.send() method is called.		issued with Channel Id = 01
1	**		RECEIVE DATA Proactive
1	CopyChannelData() with NULL dstBuffer		
	Build and send a RECEIVE DATA command	NUBCCE COLU	command is fetched.
	Bullu and Send a RECEIVE DATA COmmand	NullPointerException is thrown	
	Call		TERMINAL RESPONSE
	ProactiveResponseHandler.copyChannelData()		with not empty Channel
	dstBuffer = NULL		Data TLV is issued.
	DstOffset = 0		
	DstLength = 1		
2	CopyChannelData() with negative dstOffset		1- RECEIVE DATA
			proactive command is
	1- call init() method for the RECEIVE DATA	2- an	fetched.
	proactive command.	ArrayIndexOutOfBoundsException	
		exception is thrown.	TERMINAL RESPONSE
	2- call		with 6 bytes avalaible
	ProactiveResponseHandler.copyChannelData()	3- no copy is performed.	('Hello1')
		o no copy to performed.	(1101101)
	3- check dstBuffer is empty.		
3	CopyChannelData() with negative dstLength	1- an	
		ArrayIndexOutOfBoundsException	
	1- call	exception is thrown.	
		2- no copy is performed.	
		, po	
	DSTLENGTN = -1		
	2- check dstBuffer is empty		
3		1- an ArrayIndexOutOfBoundsException	(тепот)

ld	Description	API Expectation	APDU Expectation
4	CopyChannelData() with dstOffset+dstLength	1- an	-
	greater than dstBuffer.length 1- call	ArrayIndexOutOfBoundsException exception is thrown.	
	ProactiveResponseHandler.copyChannelData() with dstOffset+dstLength greater than dstBuffer.length. DstBuffer.length = 6 DstOffset = 5 DstLength = 2	2- no copy is performed.	
	2- check dstBuffer is empty.		
5	CopyChannelData() with dstLength too large	an OUT_OF_TLV_BOUNDARIES ToolkitException is thrown.	
	ProactiveResponseHandler.copyChannelData() with dstLength greater than the value field of the available TLV. DstBuffer.length = 10 DstOffset = 0 DstLength = 10		
6	CopyChannelData() without Channel Data TLV		1- RECEIVE DATA
	element 1- call init() method for the RECEIVE DATA	2- an UNAVAILABLE_ELEMENT	proactive command is fetched
	<pre>proactive command. Call send() method. 2- call</pre>		TERMINAL RESPONSE without ChannelData TLV element.
	<pre>ProactiveResponseHandler.copyChannelData() DstBuffer.length = 10 DstOffset = 0 DstLength = 10</pre>		
7	Successful copyChannelData()		1- RECEIVE DATA
	Call init() method for the RECEIVE DATA proactive command. Call send() method. 2- Call findTLV() with TAG of DEVICE IDENTITY.	3- the Channel Data TLV is copied into dstBuffer. The applet checks the returned value is dstOffset + dstLength = 6.	proactive command is fetched TERMINAL RESPONSE with one Channel data TLV element. (6 bytes available
	3- Call ProactiveResponseHandler.copyChannelData() DstBuffer.length = 6 DstOffset = 0 DstLength = 6 DstBuffer is the whole Buffer.		= 'Hello2')
8	Compare copied Buffer		
	Check dstBuffer.	The applet checks that dstBuffer contains the channel data from the TERMINAL RESPONSE.	
9	Check the Channel Data TLV is selected	The returned byte is the same than the first byte of the Channel data TLV (i.e. 'H')	
	Call the ViewHandler.getValueByte(0) method		
10	Successful copyChannelData()	The Channel Date TIVis conicd	
	<pre>Call ProactiveResponseHandler.copyChannelData() DstBuffer.length = 6 DstOffset = 2 DstLength = 3</pre>	The Channel Data TLV is copied into dstBuffer. The applet checks the returned value is dstOffset + dstLength = 5.	
	DstBuffer is a part of Buffer.		
11	Compare copied Buffer Check dstBuffer.	The applet checks that bytes from 2 to 4 of dstBuffer contain the first 3 bytes of channel data TLV from the TERMINAL RESPONSE.	

ld	Description	API Expectation	APDU Expectation
12	Successful copyChannelData() 1- Initialize dstBuffer to [00, 01] 2- Call ProactiveResponseHandler.copyChannelData()	2- The Channel Data TLV is copied into dstBuffer. The returned value is dstOffset +	
	DstBuffer.length = 6 DstOffset = 2 DstLength = 3	dstLength = 5.	
13	DstBuffer is a part of buffer.		
13	Compare copied Buffer Check dstBuffer.	The applet checks that only bytes from 2 to 4 of dstBuffer have been updated with the first 3 bytes of channel data TLV from the TERMINAL RESPONSE.	
14	Successful copyChannelData(), with 2 TLV 1- call init() method for the RECEIVE DATA proactive command. Call send() method. 2- call ProactiveResponseHandler.copyChannelData() with dstLength lower than the value field of the available TLV. DstBuffer.length = 6 DstOffset = 0 DstLength = 6	2- the first Channel Data TLV is copied into dstBuffer. The returned value is dstOffset+dstLength =0x06	1- RECEIVE DATA proactive command is fetched TERMINAL RESPONSE with two Channel data TLV element 1st TLV: 6 bytes available = 'Hello3' 2nd TLV: 6 bytes available = 'Hello4'
15	Compare copied Buffer Check dstBuffer.	Check that dstBuffer contains the first Channel Data TLV from the TERMINAL RESPONSE.	

5.2.5.22 Method getValueShort

Test Area Reference: Api_2_Prh_Gvsh.

5.2.5.22.1 Conformance requirement

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

5.2.5.22.1.1 Normal execution

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

5.2.5.22.1.2 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.

5.2.5.22.1.3 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.

5.2.5.22.2 Test area files

Specific triggering: None.

Test Source: Test_Api_2_Prh_Gvsh.java.

Test Applet: Api_2_Prh_Gvsh_1.java.

Cap File: api_2_prh_gvsh.cap.

5.2.5.22.3 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

5.2.5.22.4 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()		
	Call getValueShort(0) method	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown	
2	Search TLV 01h (Command Details TLV)		
	Call getValueShort(3) method	ToolkitException.OUT_OF_TLV_	
		BOUNDARIES is thrown	
3	Search TLV 01h (Command Details TLV)		
	Call getValueShort(1) method	Result is 23h 00h (Type, qualifier)	
4	Search TLV 02h (Device Identities TLV)		
	Call getValueShort(0) method	Result is 82h 81h (Source, destination)	
5	Search TLV 0Dh (Text String TLV)		
	Call getValueShort(7D) method	Result is 7Dh 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)		
	Call getValueShort(7D) method	Result is 7Dh 7Eh	
7	Call getValueShort(7F) method	Result is 7Fh 80h	
8	Call getValueShort(EE) method	Result is EEh EFh	

5.2.5.23 Method getChannelStatus

Test Area Reference: Api_2_Prh_Gcst.

5.2.5.23.1 Conformance requirement

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

 $\label{public_short} \mbox{ getChannelStatus(byte channelIdentifier)} \\ \mbox{ throws ToolkitException}$

5.2.5.23.1.1 Normal execution

- CRRN1: The method shall return the value of the first Channel Status TLV element.
- CRRN2: The Channel Status value returned shall be from the element whose channel identifier is equal to the ChannelIdentifier parameter.
- CRRN3: If the element is available it becomes the currently selected TLV.

5.2.5.23.1.2 Parameter errors

No requirements.

5.2.5.23.1.3 Context errors

- CRRC1: The method shall throw ToolkitException.UNAVAILABLE_ELEMENT if no Channel Status TLV element with the right identifier could be found.
- CRRC2: The method shall throw ToolkitException.OUT_OF_TLV_BOUNDARIES if a Channel Status TLV element with the right identifier could be found but its value is less than 2 bytes long.

5.2.5.23.2 Test area files

Test Source: Test_Api_2_Prh_Gcst.java.

Test Applet: Api_2_Prh_Gcst_1.java.

Cap File: api_2_prh_gcst.cap.

5.2.5.23.3 Test coverage

CRR number	Test case number
N1	6
N2	5,7
N3	8
C1	1,2,3
C2	4

5.2.5.23.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Applet1 is installed with maximum number		
	of channel = 01.		
1	Channel status TLV is not present		1- DISPLAY TEXT Proactive
			command is fetched.
	1- Build and send a DISPLAY TEXT command		
	2- Call ProactiveResponseHandler.		TERMINAL RESPONSE
	getChannelStatus(0x01) method.		with no Channel status TLV
		2- UNAVAILABLE ELEMENT	available.
		ToolkitException is thrown	
2	Channel status TLV with the identifier is not	•	1- OPEN CHANNEL
	present		Proactive command is
	•		fetched.
	1- Build and send a OPEN CHANNEL		
	proactive command		
			TERMINAL RESPONSE is
	2- Call ProactiveResponseHandler.	2- UNAVAILABLE ELEMENT	issued with channel status
	getChannelStatus(0x02) method.	ToolkitException is thrown	value = 0x8100.
	3- Call		
	ProactiveHandler.initCloseChannel(0x01)		3- Succesfull terminal
	and ProactiveHandler.send() methods.		response to
			initCloseChannel proactive
			command.
			oommana.

ld	Description	API Expectation	APDU Expectation
3	Channel status TLV with a length equal to 0	ATTEXPOOLUTION	1- OPEN CHANNEL
3	1- Build and send a OPEN CHANNEL		Proactive command is
	proactive command		fetched.
			lotoriou.
	2- Call ProactiveResponseHandler.	2- UNAVAILABLE_ELEMENT	
	getChannelStatus(0x01) method.	ToolkitException is thrown	TERMINAL RESPONSE
		Toomate xoop nor 10 anown	with Channel status TLV
			length equal to 0.
4	Channel status TLV with a length equal to 1		1- OPEN CHANNEL
	1- Build and send a OPEN CHANNEL		Proactive command is
	proactive command		fetched.
	2- Call ProactiveResponseHandler. getChannelStatus(0x01) method.	2- OUT_OF_TLV_BOUNDARIES	
	getthannerstatus (0x01) method.	ToolkitException is thrown	TERMINAL RESPONSE
			with Channel status TLV
			length equal to 1.
5	Get channel status value		1- OPEN CHANNEL
			Proactive Command is
	1- Call ProactiveHandler.init() method to open a channel and		fetched.
	ProactiveHandler.send() method.		
	Trodectvendinater. Bena() meenod.		TERMINAL RESPONSE is
	2- Call ProactiveResponseHandler.		issued with channel status
	getChannelStatus(0x01) method.	2- Returns 0x8100	value = 0x8100.
	2 Puilli and and a sub-shared status		
	3- Build and send a get channel status proactive command.		
	prodective command.		
6	Get channel status value with 2 TLV		1- Get channel status
			proactive command is
	1- Build and send a get channel status		fetched.
	proactive command 2- Call ProactiveResponseHandler.		
	getChannelStatus(0x01) method.	2- Returns 0x8100	TERMINAL RESPONSE is
	geomaniezeoaeae (onoz) meenea.		issued with 2 channel status
			value = 0x8100 and 0x8101.
7	Get channel status value with 2 TLV		
	1- Build and send a Get Channel status		
	proactive command.		1- Get channel status
	productive communa.		proactive command is
	2- Call ProactiveResponseHandler.		fetched.
	getChannelStatus(0x01) method.	2- Returns 0x8100	TERMINAL RESPONSE is
	4- Call	2- Returns 0x0100	issued with 2 channel status
	ProactiveHandler.initCloseChannel() and		value = 0x8200 and 0x8100.
	ProactiveHandler.send() methods.		Value - 0.0200 and 0.00 100.
			3- Succesfull terminal
			response to
			initCloseChannel proactive
			command.
8	Channel status TLV is currently selected TLV		1- OPEN CHANNEL
			Proactive Command is
	1- Call ProactiveHandler.init() method to		fetched.
	open a channel and ProactiveHandler.send() method.		
	Call ViewHandler.FindTLV() method with		TERMINAL RESPONSE is
	Device Identity Tag.		issued with channel status
	a 11 b		value = 0x0304 .
	2- Call ProactiveResponseHandler. getChannelStatus(0x03) method.	2- Returns 0x0304	
	gecondiniers cacus (0x03) mechod.	2- Netuins uxusu4	
	3- Compare ProactiveResponseHandler.		
	getChannelStatus() and	3- Check getChannelStatus()	
	ViewHandler.getValueShort(0) method	=getValueShort(0)	
	results.		3- Succesfull terminal
	4- Call		response to
	ProactiveHandler.initCloseChannel(0x03)		initCloseChannel proactive
	and ProactiveHandler.send() methods.		command.

5.2.6 Interface ToolkitConstants

5.2.6.1 Constants

Test Area Reference: Api_2_Tkc_Cons.

5.2.6.1.1 Conformance requirement

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

5.2.6.1.1.1 Normal execution

• CRRN1: The Toolkit Constants shall all have the same name and value as defined in ETSI TS 102 241 [9].

5.2.6.1.1.2 Parameter errors

No requirements.

5.2.6.1.1.3 Context errors

No requirements.

5.2.6.1.2 Test area files

None.

5.2.6.1.3 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.

5.2.7 Interface ToolkitInterface

5.2.7.1 Method processToolkit

Test Area Reference: Api_2_Tki_Prtk.

5.2.7.1.1 Conformance requirement:

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

5.2.7.1.1.1 Normal execution

- CRRN1: This interface shall be implemented by a Toolkit applet (which extends the javacard.framework.Applet class) so that it can be triggered by the Toolkit Triggering Entity according to the registration information.
- CRRN2: The Toolkit applet will have to implement the processToolkit shared method.

5.2.7.1.1.2 Parameter errors

No requirements.

5.2.7.1.1.3 Context errors

No requirements.

5.2.7.1.2 Test area files

The method is tested in the CAT Runtime Environment.

5.2.7.1.3 Test coverage

CRR number	Test case number
N1	Tested in the whole test suite
N2	Tested in the whole test suite

5.2.8 Interface ToolkitRegistry

5.2.8.1 Method allocateTimer

Test Area Reference: Api_2_Tkr_Atim.

5.2.8.1.1 Conformance requirement:

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

5.2.8.1.1.1 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: By calling this method the applet is registered to the EVENT_TIMER_EXPIRATION of the allocated timer.
- CRRN4: The timer is allocated by the applet until it explicitly releases it.
- CRRN5: When a timer is allocated, the applet can issue the Timer Management proactive command to start, stop or get the value of its allocated timer.

5.2.8.1.1.2 Parameter errors

No requirements.

5.2.8.1.1.3 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.

5.2.8.1.2 Test area files

 $Test\ Source: \qquad Test_Api_2_Tkr_Atim.java.$

Test Applet: Api_2_Tkr_Atim_1.java.

Api_2_Tkr_Atim_2.java.

Api_2_Tkr_Atim_3.java.

Cap File: api_2_tkr_atim.cap.

Installation parameters:

- The maximum number of timers is as follows for each applet:
 - Applet1 (Api_2_Tkr_Atim_1): 8 timers.
 - Applet2 (Api_2_Tkr_Atim_2): 4 timers.
 - Applet3 (Api_2_Tkr_Atim_3): 0 timer.

5.2.8.1.3 Test coverage

CRR number	Test case number
N1	1, 4
N2	1, 4
N3	3
N4	3, 4
N5	Cat Runtime Environment,
	Cre_Pcs_Pcco
C1	2
C2	5

5.2.8.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Allocates up to 8 timers (Applet1)		
	Call 8 times allocateTimer() and isEventSet(TIMER EXPIRATION).	No exception shall be thrown. Timer ID returned shall be between 01 and 08 inclusive. It shall be different after each call. Shall return true.	
2	Allocate timers more than the maximum (Applet1) The Applet1 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). Call releaseTimer(id) each time a timer expires. Call isEventSet(EVENT_TIMER_EXPIRATION) method	Shall trigger each time an ENVELOPE(TIMER EXPIRATION) is sent to the UICC, for Timer ID = '01' to '08'. Returns false.	
4	Allocate up to 4 timers (Applet2) Call 4 times 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 (Applet3) The Applet3 allocates 1 more timer.	Shall throw a ToolkitException with reason NO_TIMER_AVAILABLE.	

5.2.8.2 Method changeMenuEntry

Test Area Reference: Api_2_Tkr_Cmet.

5.2.8.2.1 Conformance requirement:

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

5.2.8.2.1.1 Normal execution

- CRRN1: After the invocation of this method, during the current card session, the CAT Runtime Environment shall dynamically update the menu stored in the Terminal. The CAT Runtime Environment shall use the data of the EF_{SUME} file under the DF_Telecom when issuing the SET UP MENU proactive 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 changeMenuEntry() method is called with helpSupported set to true then a call to isEventSet() method on EVENT_MENU_SELECTION_HELP_REQUEST event shall return true.
- CRRN5: if changeMenuEntry() method is called with helpSupported set to true andif an ENVELOPE(MENU_SELECTION_HELP_REQUEST) command is received by the UICC for this entry, then after the completion of the SET UP MENU command, the CAT Runtime Environment shall trigger the applet.
- CRRN6: if changeMenuEntry() method is called with helpsupported set to true, the CAT Runtime Environment shall issue a SET UP MENU command with command qualifier = '80'.
- CRRN7: if changeMenuEntry() method is called with helpSupported set to false and if no entry is supporting help then a call to isEventSet() method on EVENT_MENU_SELECTION_HELP_REQUEST event shall return false.
- CRRN8: if changeMenuEntry() method is called with helpSupported set to false, if no entry is supporting help and if an ENVELOPE(MENU_SELECTION_HELP_REQUEST) command is received by the UICC, then after the completion of the SET UP MENU command, the CAT Runtime Environment shall not trigger the applet.
- CRRN9: The CAT Runtime Environment shall supply in the SET UP MENU command, the icon identifier provided in the icon identifier list within the item icon identifier list Comprehension TLV if all the applets registered to the EVENT_MENU_SELECTION provide it.
- CRRN10: The CAT Runtime Environment shall set in the SET UP MENU command, 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 is different from '00', the CAT Runtime Environment shall issue a SET UP MENU proactive command containing an Item Next Action Indicator Comprehension TLV with the comprehension flag set to 0 as defined in ETSI TS 102 223 [6].

5.2.8.2.1.2 Parameter errors

- CRRP1: A java.lang.NullPointerException is thrown if menuEntry is null.
- CRRP2: A java.lang.ArrayIndexOutOfBoundsException is thrown if offset would cause access outside array bounds.
- CRRP3: A java.lang.ArrayIndexOutOfBoundsException is thrown if length would cause access outside array bounds.

• CRRP4: A java.lang.ArrayIndexOutOfBoundsException is thrown if both offset and length would cause access outside array bounds.

5.2.8.2.1.3 Context errors

- CRRC1: A ToolkitException with MENU_ENTRY_NOT_FOUND reason is thrown if the Menu Identifier isn't associated to the calling applet instance.
- CRRC2: A ToolkitException with ALLOWED_LENGTH_EXCEEDED reason is thrown if the menu entry string is bigger than the allocated space.

5.2.8.2.2 Test area files

Additional requirements for the UICC personalization:

• content of EF sume shall be:

Title Alpha Identifier: "TOOLKIT TEST".

Test Source: Test_Api_2_Tkr_Cmet.java.

Test Applet: Api_2_Tkr_Cmet_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'.

Cap File: api_2_tkr_cmet.cap.

5.2.8.2.3 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	Tested in CAT Runtime Environment:
	Cre_Apt_Emsh (Test case 1)
N9	8, 9
N10	8
N11	4
P1	10
P2	11, 12, 13
P3	14, 15
P4	16
C1	17, 18
C2	19

5.2.8.2.4 Test procedure

SETUP MENU proactive command which contains the new text for entry if interest (EVENT_MENU_SELECTION_HELP_REQUE ST). SETUP MENU proactive command which contains the new text for entry if interest for entry if interes	ld	Description	API Expectation	APDU Expectation
The UICC shall issue a SETUP MENU proactive command which contain the new text for entry if confidentifier = 0. Call isBventSet(EVENT_MENU_SELECTION_HELP_REQUE	1	buffer, with a greater length than the initial		
No exception shall be thrown.		parameters:		
Length = menuEntry.length NextAction = 0 NextAction		MenuEntry = "UseAllBuffer"	1- No exception shall be thrown.	
IconQualifier = 0		Length = menuEntry.length	2- shall return true.	
3		IconQualifier = 0	3- shall return false.	
buffer 1- Call changeMenuEntry() with parameters: Id = '01' MenuEntry = "UsePartOfBuffer" Offset = 3 Length = 12 NextAction = 0 HelpSupported = false IconQualifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST) 3 Length = 0 1- Call changeMenuEntry() for entry '01' and entry '02', with parameters: Id = '01'/'02' MenuEntry = "LengthEquals0" Offset = 0 Length = 0 NextAction = 0 HelpSupported = false IconQualifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST). The UICC shall issue a SETUP MENU on the standard in the new text for entry II O1'. 1- No exception shall be thrown. 2- Shall return false. 1- No exception shall be thrown. 2- Shall return false. 1- No exception shall be thrown.		3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE		The UICC shall issue a SETUP MENU proactive command which contains the new text for entry ID '02'.
1- Call changeMenuEntry() with parameters: Id = '01' MenuEntry = "UsePartOfBuffer" Offset = 3 Length = 12 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST) Id = '01'/'02' MenuEntry = "LengthEquals0" Offset = 0 Length = 0 NextAction = 0 HelpSupported = false IconQualifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST) The UICC shall issue a SETUP MENU proactive command which contains the new text for entry if '01'. 1- No exception shall be thrown. 2- Shall return true. 3- Shall return false. The UICC shall issue a SETUP MENU proactive command which contains the new text for entry if '01'. 1- No exception shall be thrown. 2- Shall return true. 3- Shall return false. The UICC shall issue a SETUP MENU proactive command which contains for entry '01' and entry '01' an	2			
MenuEntry = "UsePartOfBuffer" Offset = 3 Length = 12 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST) 1- Call changeMenuEntry() for entry '01' and entry '02', with parameters: Id = '01'/'02' MenuEntry = "LengthEquals0" Offset = 0 Length = 0 NextAction = 0 NextAction = 0 HelpSupported = false IconQualifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST). The UICC shall issue a SETUP MENU proactive command which contain the new text for entry II 1- No exception shall be thrown. 2- Shall return true. 3- Shall return true. The UICC shall issue a SETUP MENU proactive command which contain the new text for entry II The UICC shall issue a SETUP MENU proactive command which contain for entry '01' and		1- Call changeMenuEntry() with		
Length = 12 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST) 3- Call changeMenuEntry() for entry '01' and entry '02', with parameters: Id = '01'/'02' MenuEntry = "LengthEquals0" Offset = 0 Length = 0 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST). 3- Shall return false. The UICC shall issue a SETUP MENU proactive command which contain the new text for entry If the new te			1- No exception shall be thrown.	
HelpSupported = false IconQualifier = 0 IconIdentifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST) The UICC shall issue a SETUP MENU proactive command which contain the new text for entry ID 101. Length = 0 1- Call changeMenuEntry() for entry '01' and entry '02', with parameters: Id = '01'/'02' MenuEntry = "LengthEquals0" Offset = 0 Length = 0 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST). The UICC shall issue a SETUP MENU proactive command which contain for entry '01' and entry '01'		Length = 12	2- Shall return true.	
3- Call isEventSet (EVENT_MENU_SELECTION_HELP_REQUE ST) Length = 0 1- Call changeMenuEntry() for entry '01' and entry '02', with parameters: Id = '01'/'02' MenuEntry = "LengthEquals0" Offset = 0 Length = 0 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0. 2- Call isEventSet (EVENT_MENU_SELECTION). 3- Call isEventSet (EVENT_MENU_SELECTION_HELP_REQUE ST). The UICC shall issue as SETUP MENU proactive command which contait for entry '01' and entry '0.		<pre>HelpSupported = false IconQualifier = 0</pre>	3- Shall return false.	
1- Call changeMenuEntry() for entry '01' and entry '02', with parameters: Id = '01'/'02' MenuEntry = "LengthEquals0" Offset = 0 Length = 0 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST). The UICC shall issue as SETUP MENU proactive command which contain for entry '01' and entry '0.01'		3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE		The UICC shall issue a SETUP MENU proactive command which contains the new text for entry ID '01'.
and entry '02', with parameters: Id = '01'/'02' MenuEntry = "LengthEquals0" Offset = 0 Length = 0 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST). The UICC shall issue a SETUP MENU proactive command which contain for entry '01' and entry '0.	3	Length = 0		
MenuEntry = "LengthEquals0" Offset = 0 Length = 0 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST). The UICC shall issue a SETUP MENU proactive command which contain for entry '01' and entry '0.01' and e		and entry '02', with parameters:		
NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST). The UICC shall issue a SETUP MENU proactive command which contain for entry '01' and		MenuEntry = "LengthEquals0" Offset = 0	1- No exception shall be thrown.	
IconQualifier = 0 IconIdentifier = 0. 2- Call isEventSet(EVENT_MENU_SELECTION). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST). The UICC shall issue a SETUP MENU proactive command which contain for entry '01' and entry '		NextAction = 0	2- Shall return true.	
The UICC shall issue a SETUP MENU_SELECTION_HELP_REQUE ST). The UICC shall issue a SETUP MENU proactive command which contain for entry '01' and entry '01'		IconQualifier = 0	3- shall return false.	
SETUP MENU proactive command which contain for entry '01'and entry '01'and entry '01'.		2- Call isEventSet(EVENT_MENU_SELECTION).		
Ino text nart		isEventSet(EVENT_MENU_SELECTION_HELP_REQUE		The UICC shall issue a SETUP MENU proactive command which contains for entry '01'and entry '02', no text part.

ld	Description	API Expectation	APDU Expectation
4	Setting a next action indicator != 0	·	
	1- Call changeMenuEntry() with parameters: Id = '02' MenuEntry = "NextActionIndic" Offset = 0 Length = menuEntry.length NextAction = '10' (SETUP CALL) HelpSupported = false IconQualifier = 0 IconIdentifier = 0 2- Call isEventSet(EVENT_MENU_SELECTION). 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST). 4- Call changeMenuEntry() with parameters: Id = '02' MenuEntry = "NextActionIndic" Offset = 0 Length = menuEntry.length NextAction = '10' (SETUP CALL)	 No exception shall be thrown. Shall return true. Shall return false. 	The UICC shall issue a SETUP MENU proactive command which contains an
	<pre>HelpSupported = true IconQualifier = 0 IconIdentifier = 0</pre>		Items Next Action Indicator list and which contains a command qualifier '80'.
5	Checking applet is triggered by a MENU_SELECTION_HELP_REQUEST Send ENVELOPE (MENU_SELECTION_HELP_REQUEST) with Item Identifier = '02'	Applet is triggered by a MENU_SELECTION_HELP_REQU EST and the Item Identifier is 02	
6	help supported=true		
	<pre>1- Call changeMenuEntry() with parameters: Id = '01' MenuEntry = "HelpSupported"</pre>	 No exception shall be thrown. 	
	Offset = 0	·	
	Length = menuEntry.length NextAction = 0	2- Shall return true.	
	HelpSupported = true IconQualifier = 0 IconIdentifier = 0	3- Shall return true.	
	2- Call isEventSet(EVENT MENU SELECTION).		
	3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST).		The UICC shall issue a SETUP MENU proactive command which contains a command qualifier '80'.
7	Checking applet is triggered by a MENU_SELECTION_HELP_REQUEST Send ENVELOPE (MENU_SELECTION_HELP_REQUEST)	Applet is triggered by a MENU_SELECTION_HELP_REQU EST and the Item Identifier is 01	
	with Item Identifier = '01'		

ld	Description	API Expectation	APDU Expectation
8	Setting icons, help supported = false		
	1- call changeMenuEntry() for entries '01','02', with parameters:		
	<pre>Id = '01'/'02' MenuEntry = "IconQualifier" Offset = 0 Length = menuEntry.length NextAction = 0</pre>	 No exception shall be thrown. Shall return true. 	
	HelpSupported = false IconQualifier = '01'	3- Shall return false.	
	<pre>IconIdentifier = '02' / '01' 2- Call isEventSet(EVENT_MENU_SELECTION).</pre>	5- Shall return laise.	
	3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST).		The UICC shall issue a SETUP MENU proactive command which contains an Icon Identifier List.
9	MenuEntry is disabled		
	1- Call disableMenuEntry('01').		
	2- Call changeMenuEntry() with parameters:		
	<pre>Id = '01' MenuEntry = "EnableEntry"</pre>	1- No exception shall be thrown.	
	Offset = 0 Length = menuEntry.length NextAction = 0	2- No exception shall be thrown.3- Shall return true.	
	HelpSupported = false IconQualifier = 0	4- Shall return false.	
	<pre>IconIdentifier = 0 3- Call isEventSet(EVENT_MENU_SELECTION).</pre>	4 Ondi return taise.	The UICC shall issue a SETUP MENU proactive command which contains
	4- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST).		the entry. Without Icon identifier List Comprehension TLV
10	MenuEntry is null		
	Call ChangeMenuEntry() method with parameters: MenuEntry = NULL	Shall throw java.lang.NullPointerException.	
11	Offset causes access outside array bounds		
	<pre>changeMenuEntry() Id = '01' MenuEntry = "Violation" Offset = menuEntry.length +1 Length = 0 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0</pre>	Shall throw java.lang.ArrayIndexOutOfBoundsE xception.	
12	Big Offset causes access outside array bounds		
	<pre>changeMenuEntry() Id = '01' MenuEntry = "Violation" Offset = 255 Length = 1 NextAction = 0 HelpSupported = false IconQualifier = 0</pre>	Shall throw java.lang.ArrayIndexOutOfBoundsE xception.	
	<pre>IconQualifier = 0 IconIdentifier = 0</pre>		

ld	Description	API Expectation	APDU Expectation
	Offset < 0 causes access outside array bounds		
	changeMenuEntry() 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		
	changeMenuEntry() Id = '01' MenuEntry = "Violation" Offset = 0 Length = MenuEntry.length + 1 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0.	Shall throw java.lang.ArrayIndexOutOfBoundsException.	
15	Length < 0 causes access outside array		
	changeMenuEntry() Id = '01' MenuEntry = "Violation" Offset = 0 Length = -1 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0. Both offset and length causes access outside	Shall throw java.lang.ArrayIndexOutOfBoundsE xception.	
	changeMenuEntry() Id = '01' MenuEntry = "Violation" Offset \in [1, MenuEntry.length] Length = MenuEntry.length NextAction = 1 HelpSupported = false IconQualifier = 0 IconIdentifier = 0	Shall throw java.lang.ArrayIndexOutOfBoundsE xception.	
17	Invalid ID used		
	<pre>changeMenuEntry() Id = '00' MenuEntry = contains text, != null Offset = 0 Length = menuEntry.length < 16 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0</pre>	Shall throw a ToolkitException with MENU_ENTRY_NOT_FOUND reason code.	
18	ID isn't allocated to a menu entry of this applet		
	changeMenuEntry() Id = '0A' MenuEntry = contains text, != null Offset = 0 Length = menuEntry.length < 16 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0	Shall throw a ToolkitException with reason code: MENU_ENTRY_NOT_FOUND.	

ld	Description	API Expectation	APDU Expectation
19	The text is bigger than the allocated space changeMenuEntry() Id = '02' MenuEntry = contains text, != null Offset = 0 Length = menuEntry.length > 15 NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0	Shall throw a ToolkitException with reason code: ALLOWED_LENGTH_EXCEEDED.	
20	With a smaller text length than the initial length 1. changeMenuEntry() with parameters: Id = '02' MenuEntry = "Init" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0 2. Call isEventSet(EVENT_MENU_SELECTION) 3. Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST)	 No exception shall be thrown. Shall return true. Shall return false. 	The UICC shall issue a SETUP MENU proactive command which contains the new text for entry ID '02'.

5.2.8.3 Method clearEvent

Test Area Reference: Api_2_Tkr_Cevt.

5.2.8.3.1 Conformance requirement:

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

5.2.8.3.1.1 Normal execution

- CRRN1: A call to isEventSet() method for a cleared event shall return false after a call to clearEvent.
- CRRN2: The CAT Runtime Environment shall not trigger the applet on the occurrence of the cleared event anymore.
- CRRN3: After the call to clearEvent() method with EVENT_CALL_CONTROL_BY_NAA event, no applet is registered to this event, and the CAT Runtime Environment shall allow an applet to register to this event.
- CRRN4: If an applet is still registered to EVENT_CALL_CONTROL_BY_NAA event, the CAT Runtime Environment shall not allow an applet to register to it.

5.2.8.3.1.2 Parameter errors

- CRRP1: Shall throw a Toolkit Exception with reason EVENT_NOT_ALLOWED if event is EVENT_MENU_SELECTION.
- CRRP2: Shall throw a Toolkit Exception with reason EVENT_NOT_ALLOWED if event is EVENT_MENU_SELECTION_HELP_REQUEST.
- CRRP3: Shall throw a Toolkit Exception with reason EVENT_NOT_ALLOWED if event is EVENT_TIMER_EXPIRATION.

- CRRP4: Shall throw a Toolkit Exception with reason EVENT_NOT_ALLOWED if event is EVENT_STATUS_COMMAND.
- CRRP5: Shall throw a Toolkit Exception with reason EVENT_NOT_ALLOWED if event is EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION.

5.2.8.3.1.3 Context errors

• CRRC1: shall throw javacard.framework.TransactionException - if the operation would cause the commit capacity to be exceeded.

5.2.8.3.2 Test area files

Test Source: Test_Api_2_Tkr_Cevt.java.

Test Applet: Api_2_Tkr_Cevt_1.java.

• As default but applet registers to an event list which contains all defined events in ETSI TS 102 241 [9] excepted those that are not allowed or supported by setEvent().

Cap File: api_2_tkr_cevt.cap.

5.2.8.3.3 Test coverage

CRR number	Test case number
N1	1, 2
N2	4
N3	Tested in CAT Runtime Environment, Cre_Apt_Eccn
N4	Tested in CAT Runtime Environment, Cre_Apt_Eccn
P1	3
P2	3
P3	3
P4	3
P5	3
C1	not testable

5.2.8.3.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Clear ALLOWED unregistered events		
	For events ranging from -1, 1, 7 to 9, 11 to 23, 25 to 29, 123, 124, 126 and 127* excepted those that aren't allowed (7, 8,	1- No exception is thrown each time.	
	11, 19, 27), the applet calls:	2- Shall return false each time.	
	1- Call clearEvent() method		
	2- Call isEventSet() method		
2	Clear registered events 1- For each ALLOWED and SUPPORTED event (-1, 1, 7 to 9, 11 to 23, 25 to 29, 123, 124, 126 and 127)* excepted (7, 8, 11, 19, 27, 124), the applet calls setEvent() method. Call registerFileEvent() method. 2- For each ALLOWED and SUPPORTED event (-1, 1, 7 to 9, 11 to 23, 25 to 29, 123, 124, 126 and 127)* excepted (7, 8, 11, 19, 27), the applet calls: 2.1- Call clearEvent() method 2.2- Call isEventSet() method	1- No exception shall be thrown.2.1- No exception shall be thrown.2.2- Shall return false.	

ld	Description	API Expectation	APDU Expectation
3	Clear NOT ALLOWED events For each event among: EVENT_MENU_SELECTION, EVENT_MENU_SELECTION_HELP_REQUEST, EVENT_TIMER_EXPIRATION, EVENT_STATUS_COMMAND, EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION, 1- The applet calls clearEvent(event) method.	1- Each time, clearEvent shall throw a ToolkitException with reason EVENT_NOT_ALLOWED.	
4	Check applet is not triggered by an ENVELOPE(EVENT_EVENT_DOWNLOAD_USE R_ACTIVITY) command 1 - reset and initialize the card 2 - An ENVELOPE(EVENT_EVENT_DOWNLOAD_USER_ACTIVIT Y) is sent.	Applet is not triggered by an ENVELOPE(EVENT_EVENT_DO WNLOAD_USER_ACTIVITY) command	

NOTE: Although the clearEvent() method is defined for large range, only the allowed events are tested here, because a range is reserved for propriatary use in TS 102 241 [9], clause 4, and a range is omitted for compatibility with future releases of TS 102 241 [9].

5.2.8.4 Method disableMenuEntry

Test Area Reference: Api_2_Tkr_Dmet.

5.2.8.4.1 Conformance requirement:

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

5.2.8.4.1.1 Normal execution

- CRRN1: This method does not modify the registration state to the EVENT_MENU_SELECTION.
- CRRN2: This method does not modify the registration state to the EVENT_MENU_SELECTION_HELP_REQUEST.
- CRRN3: After invocation of this method, during the current card session, the CAT Runtime Environment 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 CAT Runtime Environment shall issue a SETUP MENU proactive command containing Item Data Object for Item 1 TLV with a length of zero and no value part.

5.2.8.4.1.2 Parameter errors

No requirements.

5.2.8.4.1.3 Context errors

CRRC1: shall throw a ToolkitException with reason ENTRY_NOT_FOUND if the menu entry does not exist
for this applet.

5.2.8.4.2 Test area files

Test Source: Test_Api_2_Tkr_Dmet.java.

Test Applet: Api_2_Tkr_Dmet_1.java.

Cap File: api_2_tkr_dmet.cap.

• 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'.

• Additional requirements for the UICC personalization:

- content of EF sume shall be:

■ Title Alpha Identifier: "TOOLKIT TEST".

5.2.8.4.3 Test coverage

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

5.2.8.4.4 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 initialize the card 2- Call isEventSet (EVENT_MENU_SELECTION) 3- Call isEventSet (EVENT_MENU_SELECTION_HELP_REQUE ST)	1- Shall return true2- Shall return false	1- The UICC 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 1- Call disableMenuEntry('01') 2- Call isEventSet(EVENT_MENU_SELECTION) 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST)	1- No exception shall be thrown2- Shall return true.3- Shall return false.	n. 3- The UICC 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- Call isEventSet (EVENT_MENU_SELECTION) 3- Call isEventSet (EVENT_MENU_SELECTION_HELP_REQUE ST)	2- Shall return true3- Shall return true	3- The UICC shall issue a SET UP MENU proactive command with entry '02', indicating help supported.

ld	Description	API Expectation	APDU Expectation
4	Check the menu after disabling a previously enabled entry registered to EVENT_MENU_SELECTION_HELP_REQUEST		
	1- Call disableMenuEntry('02') 2- Call isEventSet(EVENT_MENU_SELECTION) 3- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST)	2- Shall return true.3- Shall return true.	3- The UICC 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.	Each time a Toolkit Exception with MENU_ENTRY_NOT_FOUND reason code shall be thrown.	

5.2.8.5 Method enableMenuEntry

Test Area Reference: Api_2_Tkr_Emet.

5.2.8.5.1 Conformance requirement:

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

5.2.8.5.1.1 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 CAT Runtime Environment shall dynamically issue a SETUP MENU proactive command which does contain an ITEM COMPREHENSION TLV object for this entry.

5.2.8.5.1.2 Parameter errors

No requirements.

5.2.8.5.1.3 Context errors

• CRRC1: shall throw a ToolkitException with reason MENU_ENTRY_NOT_FOUND if the menu entry doesn't exist for this applet.

5.2.8.5.2 Test area files

Additional requirements for the UICC personalization:

content of EF sume shall be:

- Title Alpha Identifier: "TOOLKIT TEST".

- Test Source: Test_Api_2_Tkr_Emet.java.

- Test Applet: Api_2_Tkr_Emet_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'.

- Cap File: api_2_tkr_emet.cap.

5.2.8.5.3 Test coverage

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

5.2.8.5.4 Test procedure

ld	Description	1	API Expectation	APDU Expectation
1	Check menu state before		AirExpediation	Al Do Expectation
'	enabling a previously disabled entry			
	not registered to			
	EVENT_MENU_SELECTION_HELP_REQUEST			
		1-	Shall return true	
	1- Call isEventSet(EVENT_MENU_SELECTION)	2-	Shall return false	3- The UICC shall issue a
	2- Call		No exception shall be thrown.	SET UP MENU proactive
	<pre>isEventSet(EVENT_MENU_SELECTION_HELP_REQUE ST)</pre>		·	command with entry '02'
	3- Call disableMenuEntry('01')			only.
2	Check menu state after			,y.
	enabling a previously disabled entry			
	not registered to			
	EVENT_MENU_SELECTION_HELP_REQUEST			
	1- Call enableMenuEntry('01') 2- Call isEventSet(EVENT MENU SELECTION)		No exception shall be thrown.	3- The UICC shall issue a
	2- Call isEventSet(EVENT_MENU_SELECTION) 3- Call		Shall return true.	SET UP MENU proactive
	isEventSet(EVENT MENU SELECTION HELP REQUE	3-	Shall return false.	command with entry '01'
	ST)			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- Call isEventSet(EVENT_MENU_SELECTION)	2	Shall return true	
	3- Call		Shall return true	4- The UICC shall issue a
	isEventSet(EVENT_MENU_SELECTION_HELP_REQUE	_	No exception shall be thrown	SET UP MENU proactive
	ST) 4- Call disableMenuEntry('02')	-	No exception shall be thown	command with entry '01'.
4	Check menu state after			oniniana with chity of .
'	enabling a previously enabled entry			
	registered to			
	EVENT_MENU_SELECTION_HELP_REQUEST			
				3- The UICC shall issue a
	1- Call enableMenuEntry('02').	1-	No exception shall be thrown.	SET UP MENU proactive
	2- Call isEventSet(EVENT_MENU_SELECTION) 3- Call		Shall return true.	command with entries '01'
	isEventSet(EVENT MENU SELECTION HELP REQUE	3-	Shall return true.	and '02' indicating help
	ST)			supported.

ld	Description	API Expectation	APDU Expectation
5	Enabling invalid entries		
	For ID ranging from '00' to 'FF' except '01' and '02', the applet calls enableMenuEntry(ID) method.	Each time a Toolkit Exception with MENU_ENTRY_NOT_FOUND reason code shall be thrown.	

5.2.8.6 Method getPollInterval

Test Area Reference: Api_2_Tkr_Gpol.

5.2.8.6.1 Conformance requirement:

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

public short getPollInterval()

5.2.8.6.1.1 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.

5.2.8.6.1.2 Parameter errors

No requirements.

5.2.8.6.1.3 Context errors

No requirements.

5.2.8.6.2 Test area files

Test Source: Test_Api_2_Tkr_Gpol.java.

Test Applet: Api_2_Tkr_Gpol_1.java.

Cap File: api_2_tkr_gpol.cap.

5.2.8.6.3 Test coverage

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

5.2.8.6.4 Test procedure

ld		Description	API Expectation	APDU Expectation
1		Applet isn't registered to EVENT STATUS COMMAND		
		EVENT_STATOS_COMMAND	Shall return 0.	
	Cal	ll getPollInterval() method.		
2		Requesting max duration		
	1-	Call requestPollInterval(15300)	1- No exception shall be thrown.	
	2-	Reset and initialize the card	3- Shall return a value between 1 and 15300.	
	3 -	Call getPollInterval() method		

ld	Description	API Expectation	APDU Expectation
3	Requesting System Duration		
	1- Call requestPollInterval(POLL_SYSTEM_DURATION) 2- Reset and initialize the card 3- Call getPollInterval() method.	 No exception shall be thrown. Shall return a value between 1 and 15300. 	
4	Requesting no Duration		
	1- Call requestPollInterval(POLL_NO_DURATION) 2- Reset and initialize the card 3- Call getPollInterval() method.	1- No exception shall be thrown.3- Shall return 0.	

5.2.8.7 Method initMenuEntry

Test Area Reference: Api_2_Tkr_Imet.

5.2.8.7.1 Conformance requirement:

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

5.2.8.7.1.1 Normal execution

- CRRN1: The CAT Runtime Environment 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 CAT Runtime
 Environment shall use the data of the EFsume 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 UICC for this entry, then the CAT Runtime Environment shall trigger the applet.
- CRRN5: if help supported was true, the CAT Runtime Environment 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 CAT Runtime Environment shall supply in the SET UP MENU command with the icon identifier provided in the icon identifier list within the item icon identifier list Comprehension TLV if all the applets registered to the EVENT_MENU_SELECTION provide it.
- CRRN8: The CAT Runtime Environment 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 CAT Runtime Environment shall issue a SETUP MENU proactive command containing an Items Next Action Indicator Comprehension 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 UICC for this identifier, then the CAT Runtime Environment shall trigger the applet.

5.2.8.7.1.2 Parameter errors

- 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.

5.2.8.7.1.3 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 initialized (eg no more item data in applet loading parameter).

5.2.8.7.2 Test area files

Additional requirements for the UICC personalization:

- content of EFsume shall be:
 - Title Alpha Identifier: "TOOLKIT TEST"
 - Test case trigger:
 - 1- Applet instanciation.
 - 2- Menu selection.
 - 3- Menu selection Help Supported.

- Test Source: Test_Api_2_Tkr_Imet.java

- Test Applet: Api_2_Tkr_Imet_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'.

- Cap File: api_2_tkr_imet.cap.

5.2.8.7.3 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, 21, 23
P1	1
P2	2, 3, 4
P3	5, 6
P4	7
C1	8
C2	14

5.2.8.7.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	NULL as parameter to menuEntry initMenuEntry() MenuEntry = NULL	Shall throw a java.lang.NullPointerException.	
2	Offset > menuEntry.length initMenuEntry() MenuEntry = "ToolkitTest" Offset = 12 Length = 0	Shall throw java.lang.ArrayIndexOutOfBoundsException.	
3	<pre>Offset < 0 initMenuEntry() MenuEntry = "ToolkitTest" Offset = -1 Length = 11</pre>	Shall throw java.lang.ArrayIndexOutOfBoundsException.	
4	Offset = 255 initMenuEntry() MenuEntry = "ToolkitTest" Offset = 255 Length = 11	Shall throw java.lang.ArrayIndexOutOfBoundsException.	
5	<pre>Length = menuEntry.length+1 initMenuEntry() MenuEntry = "ToolkitTest" Offset = 0 Length = 12</pre>	Shall throw java.lang.ArrayIndexOutOfBoundsException.	
6	<pre>Length < 0 initMenuEntry() MenuEntry = "ToolkitTest" Offset = 0 Length = -1</pre>	Shall throw java.lang.ArrayIndexOutOfBoundsException.	
7	Offset + length > menuEntry.length initMenuEntry() MenuEntry = "ToolkitTest" Offset = 11 Length = 1	Shall throw java.lang.ArrayIndexOutOfBoundsE xception.	

ld	Description	API Expectation	APDU Expectation
8	MenuEntry.length > size allocated at loading		
	for each menu entry		
		ALLOWED LENGTH EVOLEDED	
	initMenuEntry()	ALLOWED_LENGTH_EXCEEDED	
	<pre>MenuEntry = "ToolkitTest impossible" Offset = 0</pre>	ToolkitException is thrown.	
	Length = 16		
9	Successful call,		
	menuEntry is the whole buffer		
	1- Call initMenuEntry() method		
	MenuEntry = "TOOLKIT TEST 1"	1- No exception shall be thrown,	
	Offset = 0	Shall return ID '01'.	
	Length = 14		
	NextAction = '00'	2- Shall return true.	
	<pre>HelpSupported = false IconQualifier = '00'</pre>		
	IconIdentifier = 0		
<u></u>	2- Call isEventSet(EVENT_MENU_SELECTION)		
10	Successful call,		
	menuEntry part of a buffer		
	1- Call initMenuEntry() method		
	carr intendence (, meened		
	MenuEntry = "1234567TOOLKIT TEST 2"		
	Offset = 7	1- No exception shall be	
	Length = 14 NextAction = '00'	thrown,Shall return ID '02'.	
	HelpSupported = false	2- Shall return false.	
	IconQualifier = '00'		
	<pre>IconIdentifier = 0</pre>		
	0 0-11		
	2- Call isEventSet(EVENT MENU SELECTION HELP REQUE		
	ST)		
11	Successful call,		
	menuEntry with help supported		
	1 Call initManuFature() mathed		
	1- Call initMenuEntry() method		
	MenuEntry = "TOOLKIT TEST 3"		
	Offset = 0	1- No exception shall be thrown,	
	Length = 14	Shall return ID '03'	
	<pre>NextAction = '00' HelpSupported = true</pre>	2- Shall return true.	
	IconQualifier = '00'		
	IconIdentifier = 0		
1			
	2- Call isEventSet(EVENT_MENU_SELECTION_HELP_REQUE		
	ST)		
12	Successful call,		
	menuEntry with an Icon		
	initMenuEntry()		
	MenuEntry = "TOOLKIT TEST 4" Offset = 0	1- No exception shall be thrown.	
	Length = 14	2- Shall return ID '04'	
	NextAction = '00'		
	HelpSupported = false		
	<pre>IconQualifier = '01' [icon not self</pre>		
	explanatory] IconIdentifier = 1		
	TCOULTGEHCTITET = I		

13	Description	API Expectation	APDU Expectation
	Successful call,	-	-
	menuEntry with a next action indication		
i	.nitMenuEntry()		
M	MenuEntry = "TOOLKIT TEST 5"	1- No exception shall be thrown.	
1	Offset = 0	2- Shall return ID '05'	
	ength = 14 TextAction = '24' [Select Item]		
	<pre>lelpSupported = false</pre>		
	conQualifier = '00'		
14	conIdentifier = 0 Successful call,	No exception shall be thrown, hall	
14	length = 0	return ID '06'.	
	.og = 0	Totall'12 00.	
C	Call initMenuEntry() method		
M	MenuEntry = "ToolkitTest"		
	offset = 0		
	ength = 0		
	<pre>WextAction = '00' WelpSupported = false</pre>		
	conQualifier = '00'		
I	conIdentifier = 0		
15	Initialize more entry than allocated at loading		
lli	.nitMenuEntry()	REGISTRY_ERROR	
M	MenuEntry = "ToolkitTest"	ToolkitException is thrown.	
	Offset = 0		
	pength = 11 Dynamic update of the menu stored by the ME		Card shall send a
	by find the update of the mond otored by the me		SetUpMenu Proactive
			command:
F	etch the setup menu 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
47	Charle Applet to take a very		
17	Check Applet is triggered by envelope(MENU_SELECTION) command	Applet is triggered by an	
	Chreiope(milito_ollico nota) command	ENVELOPE(MENU_SELECTION)	
M	Menu Entry ID = '01'	command & Menu Entry ID = '01'	
		,	
18	Check Applet is triggered by envelope (MENU_SELECTION) command	Applot is triggored by an	
	(MEMO_SELECTION) COMMISTIC	Applet is triggered by an ENVELOPE(MENU_SELECTION)	
M	Menu Entry ID = '02'	command & Menu Entry ID = '02'	
19	Check Applet is triggered by envelope	Applet is triangular to the	
	(MENU_SELECTION) command	Applet is triggered by an ENVELOPE(MENU_SELECTION)	
M	Ienu Entry ID = '03'	command & Menu Entry ID = '03'	
		communic a Mona Entry ID = 00	
	Check Applet is triggered by envelope		
20		I Applot is triggered by ap	İ
20	(MENU_SELECTION) command	Applet is triggered by an	
	(MENU_SELECTION) command Menu Entry ID = '04'	ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '04'	

ld	Description	API Expectation	APDU Expectation
21	Check Applet is triggered by envelope (MENU_SELECTION) command Menu Entry ID = '05'	Applet is triggered by an ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '05'	
22	Check Applet is triggered by envelope (MENU_SELECTION_HELP_REQUEST) command		
	Menu Entry ID = '03'	Applet is triggered by an ENVELOPE(MENU_SELECTION_HELP_REQUEST) command & Menu Entry ID = '03'	
23	Check Applet is triggered by envelope		
	(MENU_SELECTION) command Menu Entry ID = '06'	Applet is triggered by an ENVELOPE(MENU_SELECTION) command & Menu Entry ID = '06'	

5.2.8.8 Method is Event Set

Test Area Reference: Api_2_Tkr_Ievs.

5.2.8.8.1 Conformance requirement:

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

public boolean isEventSet(short event)

5.2.8.8.1.1 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.

5.2.8.8.1.2 Parameter errors

No requirements.

5.2.8.8.1.3 Context errors

No requirements.

5.2.8.8.2 Test area files

Test Source: Test_Api_2_Tkr_Ievs.java

Test Applet: Api_2_Tkr_Ievs_1.java

Api_2_Tkr_Ievs_2.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.

Cap File: api_2_tkr_ievs.cap.

5.2.8.8.3 Test coverage

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

5.2.8.8.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Install Applet1 only registered to EVENT_UNRECOGNIZED_ENVELOPE and EVENT_MENU_SELECTION		·
	Test that events aren't set	Shall return false each time.	
	Applet calls isEventSet() method for each event ranging from (-1, 1, 7 to 9, 11 to 23, 25 to 29, 123, 124, 126 and 127)* excepted EVENT_UNRECOGNIZED_ENVELOPE(-1) and EVENT MENU SELECTION(7).		
2	For EVENT_UNRECOGNIZED_ENVELOPE	Shall return true.	
	Call isEventSet(EVENT_UNRECOGNIZED_ENVELOPE)		
3	For EVENT_MENU_SELECTION	Shall return true	
	Call isEventSet(EVENT_MENU_SELECTION)		
4	After clearing EVENT_UNRECOGNIZED_ENVELOPE	1- No exception shall be thrown.	
	1- Call clearEvent(EVENT_UNRECOGNIZED_ENVELOPE) 2- Call isEventSet(EVENT UNRECOGNIZED ENVELOPE)	2- Shall return false.	
5	Setting events		
	For all allowed events defined in ETSI TS 102 241[9] for setEvent()method: EVENT_PROFILE_DOWNLOAD, EVENT_CALL_CONTROL_BY_NAA, EVENT_EVENT_DOWNLOAD_MT_CALL, EVENT_EVENT_DOWNLOAD_CALL_CONNECTED, EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_LOCATOREED_AVAILABLE, EVENT_EVENT_DOWNLOAD_LOCATOREED_STATUS, EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION, EVENT_EVENT_DOWNLOAD_DATA_AVAILABLE, EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS, EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHANGE, EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_CHANGE, EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_CHANGE, EVENT_EVENT_DOWNLOAD_BROWSING_STATUS, EVENT_PROACTIVE_HANDLER_AVAILABLE, EVENT_PROACTIVE_HANDLER_AVAILABLE, EVENT_FIRST_COMMAND_AFTER_ATR, EVENT_UNRECOGNIZED_ENVELOPE		
	<pre>applet calls: 1- Call setEvent() method</pre>	1- No exception shall be thrown.	
	2- Call isEventSet() method	2- Shall return true each time.	

ld	Description	API Expectation	APDU Expectation
6	For EVENT_MENU_SELECTION_HELP_REQUEST	-	-
	l- Call	1- Shall return false.	
	isEventSet(EVENT_MENU_SELECTION_HELP_REQUEST)		
	2- Call changeMenuEntry() with help supported		
	3- Call	2- Shall return true.	
	isEventSet(EVENT_MENU_SELECTION_HELP_REQUEST)	2 Gran retarri trae.	
7	For EVENT_TIMER_EXPIRATION		
	1- Call isEventSet(EVENT TIMER EXPIRATION)	1- Shall return false.	
	2- Call allocateTimer()	3- Shall return true.	
	3- Call isEventSet(EVENT_TIMER_EXPIRATION)	Gridii retarri trac.	
8	For EVENT_STATUS_COMMAND		
		1- Shall return false.	
	Call isEventSet(EVENT_STATUS_COMMAND) Call requestPollInterval(POLL SYSTEM DURATION)	3- Shall return true.	
	Call isEventSet(EVENT STATUS COMMAND)	3- Shall return true.	
9	For		
	EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION		
	1- Call isEventSet		
	(EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION)	1- Shall return false.	
	2- Call allocateServiceIdentifier()		
	3- Call isEventSet	3- Shall return true.	
	(EVENT EVENT DOWNLOAD LOCAL CONNECTION)		
10	Install Applet2 only registered to		
	EVENT_MENU_SELECTION		
	Call isEventSet(EVENT_UNRECOGNIZED_ENVELOPE)	Shall return false.	

NOTE: Although the method isEventSet() is defined for a large range only the allowed events are tested, because a range is reserved for propriatary use in ETSI TS 102 241 [9], clause 4, and a range is omitted for compatibility with future releases of ETSI TS 102 241 [9].

5.2.8.9 Method releaseTimer

Test Area Reference: Api_2_Tkr_Rtim.

5.2.8.9.1 Conformance requirement:

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

5.2.8.9.1.1 Normal execution

- CRRN1: Release a Timer that has been allocated to the calling applet.
- CRRN2: After invocation of the method the indicated timer shall be released and available for reallocation.
- CRRN3: The applet is deregistered of the EVENT_TIMER_EXPIRATION for the indicated Timer Identifier.

5.2.8.9.1.2 Parameter errors

 CRRP1: shall throw a ToolkitException with INVALID_TIMER_ID reason if the timer identifier isn't between 1 and 8.

5.2.8.9.1.3 Context errors

• CRRC1: shall throw a ToolkitException with INVALID_TIMER_ID reason if the timer is not allocated to this applet.

5.2.8.9.2 Test area files

Test Source: Test_Api_2_Tkr_Rtim.java.

Test Applet: Api_2_Tkr_Rtim_1.java.

Cap File: api_2_tkr_rtim.cap.

• Installation parameter:

- As Default, except max timer which is set to 8.

5.2.8.9.3 Test coverage

CRR number	Test case number
N1	2, 3, 4
N2	5, 6
N3	7
N4	7
P1	1, 3
C1	CAT Runtime Environment, Cre_Pcs_Pcco

5.2.8.9.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Release 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	Release allocated timers		
	1- Call 8 times allocateTimer()	1- No exception shall be thrown.2- Each time, no exception shall be	
	2- Call 7 times releaseTimer(id)	thrown.	
	3- Call isEventSet(EVENT_TIMER_EXPIRATION)	3- Shall return true	
3	Release invalid timer ID	1- Shall throw a ToolkitException	
	1- Call releaseTimer('FF') method	with INVALID_TIMER_ID reason code.	
	2- Call isEventSet(EVENT_TIMER_EXPIRATION)	2- Shall return true.	
4	Release last timer		
	1- Call releaseTimer(last timer allocated)	1- No exception shall be thrown.	
	2- Call isEventSet(EVENT_TIMER_EXPIRATION)	2- Shall return false.	
5	Check we can allocate timers after they have		
	been released	No expection about he shows	
	Call 8 times allocateTimer() method	No exception shall be thrown.	
6	Release all timers		
	For 1 to 8, Call releaseTimer(id)	No exception shall be thrown.	

ld	Description	API Expectation	APDU Expectation
7	Check applet is not triggered by		
	envelope(EVENT_TIMER_EXPIRATION)	Applet is not triggered by any	
	command	envelope(EVENT_TIMER_EXPIRA	
		TION) command	
	Send envelope (EVENT TIMER EXPIRATION)		

5.2.8.10 Method requestPollInterval

Test Area Reference: Api_2_Tkr_Rpol.

5.2.8.10.1 Conformance requirement

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

 $\label{eq:public_public} \begin{tabular}{ll} public void requestPollInterval(short duration) \\ throws ToolkitException \\ \end{tabular}$

5.2.8.10.1.1 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.

5.2.8.10.1.2 Parameter errors

• CRRP1: the method should throw a ToolkitException with REGISTRY_ERROR reason if duration is > 15300 or is < -1 (POLL_SYSTEM_DURATION).

5.2.8.10.1.3 Context errors

No requirements.

5.2.8.10.2 Test area files

Test Source: Test_Api_2_Tkr_Rpol.java.

Test Applet: Api_2_Tkr_Rpol_1.java.

Cap File: api_2_tkr_rpol.cap.

5.2.8.10.3 Test coverage

CRR number	Test case number
N1	1, 2, 3, 4
N2	6, 7
P1	5

5.2.8.10.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Request a value between 1 and 15300 s		
	1- Call isEventSet(EVENT_STATUS_COMMMAND)	1- Shall return false.	
	2- Call requestPollInterval(duration) for boundaries values: 1, 255, 256, 15300.	2- No exception shall be thrown.	
	3- Call isEventSet(EVENT_STATUS_COMMAND).	3- Shall return true.	

ld	Description	API Expectation	APDU Expectation
2	Check Applet is triggered by a STATUS command 1- reset and card initialization 2- Send STATUS command	2- Applet is triggered by a STATUS command	
3	Request POLL SYSTEM DURATION		
	1- Call isEventSet(EVENT_STATUS_COMMMAND). 2- Call RequestPollInterval(POLL_SYSTEM_DURATION). 3- Call IsEventSet(EVENT_STATUS_COMMAND).	1- Shall return true.2- No exception shall be thrown.3- Shall return true.	
4	Check Applet is triggered by a STATUS command 1- reset and card initialization 2- Send STATUS command	2- Applet is triggered by a STATUS command	
5	Request invalid duration Call requestPollInterval(duration) for following values: 15301, 32767, -2, -32768	Each time, a ToolkitException with REGISTRY_ERROR reason code, shall be thrown.	
6	Request POLL NO DURATION		
	1- Call isEventSet(EVENT_STATUS_COMMMAND)	1- Shall return true.	
	2- Call requestPollInterval(POLL_NO_DURATION)	2- No exception shall be thrown.	
	3- Call isEventSet(EVENT_STATUS_COMMAND)	3- Shall return false.	
7	Check Applet is not triggered by an STATUS command. 1- reset and card initialization 2- Send STATUS command	2- Applet is not triggered by a STATUS command	

5.2.8.11 Method setEvent

Test Area Reference: Api_2_Tkr_Sevt

5.2.8.11.1 Conformance requirement

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

5.2.8.11.1.1 Normal execution

- CRRN1: A following call to isEventSet() method with the same event id shall answer true for the applet.
- CRRN2: The CAT Runtime Environment shall trigger the applet if an occurrence of the set event happens.
- CRRN3: the method shall accept all the events defined in TS 102 241 [9] except:
 EVENT_MENU_SELECTION, EVENT_MENU_SELECTION_HELP_REQUEST,
 EVENT_TIMER_EXPIRATION, EVENT_STATUS_COMMAND,
 EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION and EVENT_EXTERNAL_FILE_UPDATE.
- CRRN4: no exception shall be thrown if the applet registers more than once to the same event.
- CRRN5: all updates in the ToolkitRegistry are atomic.

5.2.8.11.1.2 Parameter errors

- 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.
- CRRP6: shall throw a Toolkit Exception with reason EVENT_NOT_ALLOWED if event was EVENT EVENT DOWNLOAD LOCAL CONNECTION.
- CRRP7: shall throw a Toolkit Exception with reason EVENT_NOT_ALLOWED if event was EVENT_EXTERNAL_FILE_UPDATE.

5.2.8.11.1.3 Context errors

- CRRC1: shall throw a ToolkitException with EVENT_ALREADY_REGISTERED if event is EVENT_CALL_CONTROL_BY_NAA but another applet is already registered to it.
- CRRC2: shall throw a ToolkitException with EVENT_ALREADY_REGISTERED if event is EVENT_CALL_CONTROL_BY_NAA but another applet that it is not in selectable state is already registered to it.
- CRRC3: shall throw javacard.framework.TransactionException if the operation would cause the commit capacity to be exceeded.
- CRRC4: shall throw a ToolkitException with TAR_NOT_DEFINED if the event requests a tag and the applet
 has no TAR defined.

5.2.8.11.2 Test area files

Test Source: Test Api 2 Tkr Sevt.java.

Test Applet: Api_2_Tkr_Sevt_1.java.

Api_2_Tkr_Sevt_2.java.

Api_2_Tkr_Sevt_3.java.

Api_2_Tkr_Sevt_4.java.

The load script installs the 4 instances.

Cap File: api_2_tkr_sevt.cap.

5.2.8.11.3 Test coverage

CRR number	Test case number	
N1	2	
N2	1, 10, 11	
N3	2, 4, 5, 6, 7, 8, 9	
N4	14	
N5	not testable	
P1	3	
P2	4	
P3	5	

CRR number	Test case number	
P4	6	
P5	7	
P6	8	
P7	9	
C1	12	
C2	13	
C3	not testable	
C4	not testable	

5.2.8.11.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Applet1 is triggered by envelope (EVENT_EVENT_DOWNLOAD_USER_ACTIVITY) command. Send	Applet1 shall be triggered	·
	ENVELOPE(EVENT_EVENT_DOWNLOAD_USER_ACTIVITY)		
2	Set ALLOWED and SUPPORTED events		
	1- For all allowed events (-1, 1, 7 to 9, 11 to 23, 25 to 29, 123, 124, 126 and 127 excepted 7, 8, 11, 19, 27, 124) defined in ETSI TS 102 241 []*: EVENT_PROFILE_DOWNLOAD, EVENT_CALL_CONTROL_BY_NAA, EVENT_EVENT_DOWNLOAD_MT_CALL, EVENT_EVENT_DOWNLOAD_CALL_CONNECTED, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION, EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION, EVENT_EVENT_DOWNLOAD_DATA_AVAILABLE, EVENT_EVENT_DOWNLOAD_LOCATION_STATUS, EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CHANGED, EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_CHANGE, EVENT_EVENT_DOWNLOAD_BROWSING_STATUS, EVENT_PROACTIVE_HANDLER_AVAILABLE, EVENT_PROACTIVE_HANDLER_AVAILABLE, EVENT_PROACTIVE_HANDLER_AVAILABLE, EVENT_APPLICATION_DESELECT,		
	EVENT_FIRST_COMMAND_AFTER_ATR, EVENT_UNRECOGNIZED_ENVELOPE		
	1.1- Call clearEvent(event)	1.1- No exception shall be thrown.	
	1.2- Call isEventSet(event)	1.2- Shall return false.	
	1.3- Call setEvent(event) 1.4- Call isEventSet(event)	1.3- No exception shall be thrown.	
	1.5- Call clearEvent(event)	1.4- Shall return true.	
		1.5- No exception shall be thrown.	
3	Set Event 0 Call setEvent(0)	Shall throw a ToolkitException with EVENT_NOT_SUPPORTED reason code.	

ld	Description	API Expectation	APDU Expectation
4	Set EVENT_MENU_SELECTION Call setEvent(EVENT_MENU_SELECTION)	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason code.	Expediation
5	Set EVENT_MENU_SELECTION_HELP_REQUEST Call setEvent(EVENT_MENU_SELECTION_HELP_REQUEST)	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason code.	
6	Set EVENT_TIMER_EXPIRATION Call setEvent(EVENT_TIMER_EXPIRATION)	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason code.	
7	Set EVENT_STATUS_COMMAND Call setEvent(EVENT_STATUS_COMMAND)	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason code.	
8	Set EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION Call setEvent(EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION)	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason code.	
9	Set EVENT_EXTERNAL_FILE_UPDATE Call setEvent(EVENT_EXTERNAL_FILE_UPDATE)	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason code.	
10	Set EVENT_CALL_CONTROL_BY_NAA Call setEvent (EVENT_CALL_CONTROL_BY_NAA)	No Exception shall be thrown	
11	Check applet is triggered by envelope (CALL_CONTROL_BY_NAA) command Trigger Applet1	Applet1 is triggered by an ENVELOPE(CALL_CONTROL_BY_NAA)	
12	Applet2 registers to EVENT_CALL_CONTROL_BY_NAA but it is already assigned to another applet Applet2 call setEvent (EVENT_CALL_CONTROL_BY_NAA)	Shall throw a ToolkitException with EVENT_ALREADY_REGISTERED reason code.	
13	Applet3 registers to EVENT_CALL_CONTROL_BY_NAA but it is already assigned to another applet in not selectable state		
	 1- Set Applet1 in the lock state 2- Trigger Applet3 which calls setEvent(EVENT_CALL_CONTROL_BY_NAA) 3- Set Applet1 in the make selectable state 	2- Shall throw a ToolkitException with EVENT_ALREADY_REGISTERED reason code.	
14	Applet4 registers multiple registration to the same		
	event 1- setEvent(EVENT_EVENT_DOWNLOAD_MT_CALL) 2- setEvent(EVENT_EVENT_DOWNLOAD_MT_CALL) 3- isEventSet(EVENT_EVENT_DOWNLOAD_MT_CALL)	1- no exception should be thrown2- no exception should be thrown3- method should return true	

NOTE: Although the method setEvent is defined for large range only the allowed events are tested, because a range is reserved for propriatary use in ESTI TS 102 241 [9], clause 4, and a range is omitted for compatibility with future releases of ETSI TS 102 241 [9].

5.2.8.12 Method setEventList

Test Area Reference: Api_2_Tkr_Sevl.

5.2.8.12.1 Conformance requirement

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

5.2.8.12.1.1 Normal execution

- CRRN1: For all events set successfully by this method, sets an event list in the Toolkit Registry entry of the applet.
- CRRN2: The CAT Runtime Environment shall trigger the applet if an occurrence of one of the successfully registered events happens.
- CRRN3: All updates on the ToolkitRegistry are atomic.
- CRRN4: No exception shall be thrown if the applet registers more than once to the same event.

5.2.8.12.1.2 Parameter errors

- 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.
- CRRP10: Shall throw a Toolkit Exception with reason EVENT_NOT_ALLOWED if event was EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION.
- CRRP11: Shall throw a Toolkit Exception with reason EVENT_NOT_ALLOWED if event was EVENT_EXTERNAL_FILE_UPDATE.

5.2.8.12.1.3 Context errors

- CRRC1: shall throw a ToolkitException with EVENT_ALREADY_REGISTERED if eventList contains EVENT_CALL_CONTROL_BY_NAA but another applet is already registered to it.
- CRRC2: shall throw javacard.framework.TransactionException if the operation would cause the commit capacity to be exceeded.
- CRRC3: shall throw a ToolkitException with TAR_NOT_DEFINED if the eventList contains an event that requests a tag and the applet has not at least one TAR value assigned.

5.2.8.12.2 Test area files

Test Source: Test_Api_2_Tkr_Sevl.java.

Test Applet: Api_2_Tkr_Sevl_1.java.

Api_2_Tkr_Sevl_2.java.

Cap File: api_2_tkr_sevl.cap.

5.2.8.12.3 Test coverage

CRR number	Test case number	
N1	1, 2	
N2	18, 19	
N3	21	
N4	22	
P1	3	
P2	4, 5, 6	
P3	7, 8, 9	
P4	10	
P5	11	
P6	12	
P7	13	
P8	14	
P9	15	
P10	16	
P11	17	
C1	20	
C2	not testable	
C3	not testable	

5.2.8.12.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Applet1 registering all eventList buffer	·	•
	Applet1 is triggered by an		
	envelope (MENU_SELECTION) (Id = 01)		
	EventList = all allowed events (-1, 1, 7 to 9, 11		
	to 23, 25 to 29, 123, 124, 126 and 127 excepted		
	7, 8, 11, 19, 27, 124) defined in TS 102 241 [9]:		
	EVENT_PROFILE_DOWNLOAD,		
	EVENT_CALL_CONTROL_BY_NAA,		
	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 EVENT DOWNLOAD DATA AVAILABLE,		
	EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS,		
	EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHANGE,		
	EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CHANGED,		
	EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_CHANGE,		
	EVENT_EVENT_DOWNLOAD_BROWSING_STATUS,		
	EVENT_PROACTIVE_HANDLER_AVAILABLE,		
	EVENT_APPLICATION_DESELECT,		
	EVENT_FIRST_COMMAND_AFTER_ATR,		
	EVENT_UNRECOGNIZED_ENVELOPE		
	1- For each event in EventList, clearEvent(event)	1- No exception shall be	
	2- Call setEventList(eventList)	thrown.	
	Offset = 0	2- No exception shall be	
	Length = eventList.length	thrown.	
	3- For all events in eventList, isEventSet(event)	3- Each time shall return true.	
	4- For each event in EventList, clearEvent(event)		
		4- No exception shall be	
		thrown.	
2	Registering part of eventList buffer		
	31		
	EventList = all allowed events defined in TS 102	1- No exception shall be	
	241 [9] (see test case 1).	thrown.	
		2- Each time shall return true	
	<pre>1- setEventList(eventList, offset, length) Offset > 0</pre>	for events ranging from offset	
	Length = eventList.lentgh - offset	to offset+length else shall	
	Lengen - evenesiberienegn office	return false.	
	2- For all events in eventList:		
	Call isEventSet(event)	3- No exception shall be	
		thrown.	
	3- For each event in EventList: clearEvent(event)		
3	Null buffer		
ا ا	Null Duffer	Shall throw a	
	setEventList()	java.lang.NullPointerException	
	EventList = null	Exception	
4	Out of bounds offset		
		Shall throw a	
	<pre>setEventList() Offset = eventList.length</pre>	java.lang.ArrayIndexOutOfBou	
	Length = 1	nds Exception	
	nengen – 1	·	
Ц	<u> </u>	<u>l</u>	

ld	Description	API Expectation	APDU Expectation
5	Out of bounds and big offset		-
	setEventList()	Shall throw a	
	Offset = 255	java.lang.ArrayIndexOutOfBou	
	Length = 1	nds Exception	
6	Offset < 0		
0	Oliset < 0	Chall throw a	
	setEventList()	Shall throw a java.lang.ArrayIndexOutOfBou	
	Offset = -1	nds Exception	
	Length = 1	Tide Exception	
7	Out of bounds length		
		Shall throw a	
	<pre>setEventList() Offset = 0</pre>	java.lang.ArrayIndexOutOfBou	
	Length = eventList.length + 1	nds Exception	
8	Out of bounds and big length		
	setEventList()	Shall throw a	
	Offset = 0	java.lang.ArrayIndexOutOfBou	
	Length = 255	nds Exception	
9	Length < 0		
		Shall throw a	
	setEventList()	java.lang.ArrayIndexOutOfBou	
	Offset = 0 Length = -1	nds Exception	
	hength = -1		
10	Out of bounds offset + Length		
	. =	Shall throw a	
	<pre>setEventList() Offset + length > eventList.length + 1</pre>	java.lang.ArrayIndexOutOfBou	
	oriset + rength > eventhist.rength + r	nds Exception	
11	Event 0		
''	E TOIR V		
' '		Shall throw a ToolkitException	
' '	Call setEventList(eventList) with eventList	with	
		with EVENT_NOT_SUPPORTED	
	Call setEventList(eventList) with eventList	with	
12	Call setEventList(eventList) with eventList	with EVENT_NOT_SUPPORTED reason code.	
	Call setEventList(eventList) with eventList indicating event 0 EVENT_MENU_SELECTION	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException	
	Call setEventList(eventList) with eventList indicating event 0	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code	
	Call setEventList(eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList(eventList) with eventList	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException	
	Call setEventList(eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList(eventList) with eventList	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code	
12	Call setEventList(eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList(eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException	
12	Call setEventList(eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList(eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList(eventList) with eventList	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException with reason code	
12	Call setEventList(eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList(eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException	
12	Call setEventList(eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList(eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList(eventList) with eventList	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException with reason code	
12	Call setEventList(eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList(eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList(eventList) with eventList indicating EVENT_MENU_SELECTION_HELP_REQUEST EVENT_TIMER_EXPIRATION	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException	
12	Call setEventList (eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION_HELP_REQUEST EVENT_TIMER_EXPIRATION Call setEventList (eventList) with eventList	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException with reason code	
13	Call setEventList(eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList(eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList(eventList) with eventList indicating EVENT_MENU_SELECTION_HELP_REQUEST EVENT_TIMER_EXPIRATION Call setEventList(eventList) with eventList indicating EVENT_TIMER_EXPIRATION	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException	
12	Call setEventList (eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION_HELP_REQUEST EVENT_TIMER_EXPIRATION Call setEventList (eventList) with eventList	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED.	
13	Call setEventList (eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION_HELP_REQUEST EVENT_TIMER_EXPIRATION Call setEventList (eventList) with eventList indicating EVENT_TIMER_EXPIRATION EVENT_STATUS_COMMAND Call setEventList (eventList) with eventList	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException	
13	Call setEventList(eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList(eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList(eventList) with eventList indicating EVENT_MENU_SELECTION_HELP_REQUEST EVENT_TIMER_EXPIRATION Call setEventList(eventList) with eventList indicating EVENT_TIMER_EXPIRATION EVENT_STATUS_COMMAND	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED.	
13	Call setEventList (eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION_HELP_REQUEST EVENT_TIMER_EXPIRATION Call setEventList (eventList) with eventList indicating EVENT_TIMER_EXPIRATION EVENT_STATUS_COMMAND Call setEventList (eventList) with eventList	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED.	
12 13 14	Call setEventList(eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList(eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList(eventList) with eventList indicating EVENT_MENU_SELECTION_HELP_REQUEST EVENT_TIMER_EXPIRATION Call setEventList(eventList) with eventList indicating EVENT_TIMER_EXPIRATION EVENT_STATUS_COMMAND Call setEventList(eventList) with eventList indicating EVENT_STATUS_COMMAND EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException	
12 13 14	Call setEventList (eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION_HELP_REQUEST EVENT_TIMER_EXPIRATION Call setEventList (eventList) with eventList indicating EVENT_TIMER_EXPIRATION EVENT_STATUS_COMMAND Call setEventList (eventList) with eventList indicating EVENT_STATUS_COMMAND EVENT_STATUS_COMMAND EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION Call setEventList (eventList) with eventList	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException with reason code	
12 13 14	Call setEventList (eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION_HELP_REQUEST EVENT_TIMER_EXPIRATION Call setEventList (eventList) with eventList indicating EVENT_TIMER_EXPIRATION EVENT_STATUS_COMMAND Call setEventList (eventList) with eventList indicating EVENT_STATUS_COMMAND EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION Call setEventList (eventList) with eventList indicating EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException	
12 13 14	Call setEventList (eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION_HELP_REQUEST EVENT_TIMER_EXPIRATION Call setEventList (eventList) with eventList indicating EVENT_TIMER_EXPIRATION EVENT_STATUS_COMMAND Call setEventList (eventList) with eventList indicating EVENT_STATUS_COMMAND EVENT_STATUS_COMMAND EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION Call setEventList (eventList) with eventList	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED.	
12 13 14 15	Call setEventList (eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION_HELP_REQUEST EVENT_TIMER_EXPIRATION Call setEventList (eventList) with eventList indicating EVENT_TIMER_EXPIRATION EVENT_STATUS_COMMAND Call setEventList (eventList) with eventList indicating EVENT_STATUS_COMMAND EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION Call setEventList (eventList) with eventList indicating EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION Call setEventList (eventList) with eventList indicating EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED. Shall throw a ToolkitException	
12 13 14 15	Call setEventList (eventList) with eventList indicating event 0 EVENT_MENU_SELECTION Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION EVENT_MENU_SELECTION_HELP_REQUEST Call setEventList (eventList) with eventList indicating EVENT_MENU_SELECTION_HELP_REQUEST EVENT_TIMER_EXPIRATION Call setEventList (eventList) with eventList indicating EVENT_TIMER_EXPIRATION EVENT_STATUS_COMMAND Call setEventList (eventList) with eventList indicating EVENT_STATUS_COMMAND EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION Call setEventList (eventList) with eventList indicating EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION	with EVENT_NOT_SUPPORTED reason code. Shall throw a ToolkitException with reason code EVENT_NOT_ALLOWED.	

ld	Description	API Expectation	APDU Expectation
18	Sett EVENT_CALL_CONTROL_BY_NAA Call setEventList(MonoEventList, 0, 1) with MonoEventList containing EVENT_CALL_CONTROL_BY_NAA	Shall not throw an exception.	
19	Check applet is triggered by an ENVELOPE (CALL_CONTROL_BY_NAA) Reset and initialize the card Trigger Applet1	Applet is triggered by an ENVELOPE(CALL_CONTROL _BY_NAA)	
20	Applet2 registers to CALL_CONTROL_BY_NAA but it is already assigned Applet2 is triggered by an envelope (MENU_SELECTION) (Id=02) 1- Call setEventList (MonoEventList,0,1) with MonoEventList containing EVENT_CALL_CONTROL_BY_NAA	1- Shall throw a ToolkitException with EVENT_ALREADY_REGISTE RED reason code.	
21	Atomicity 1- Call setEventList(EVENT_CALL_CONTROL_BY_NAA, EVENT_EVENT_DOWNLOAD_CALL_CONNECTED) 2- isEventSet (EVENT_EVENT_DOWNLOAD_CALL_CONNECTED)	1- Shall throw a ToolkitException with EVENT_ALREADY_REGISTE RED reason code. 2- method shallreturn false	
22	Multiple registration to the same event 1- setEventList(EVENT_EVENT_DOWNLOAD_MT_CALL, EVENT_EVENT_DOWNLOAD_MT_CALL) 2- isEventSet(EVENT_EVENT_DOWNLOAD_MT_CALL)	1- no exception should be thrown 2- method shall return true	

5.2.8.13 Method allocateServiceIdentifier

Test Area Reference: Api_2_Tkr_Asid.

5.2.8.13.1 Conformance requirement

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

5.2.8.13.1.1 Normal execution

- CRRN1: The returned service identifier shall be between 00 and 07 inclusive.
- CRRN2: The returned service identifier shall be different from a previously allocated but not released one.
- CRRN3: By calling this method the applet is registered to the EVENT_EVENT_ DOWNLOAD_LOCAL_CONNECTION of the allocated service.
- CRRN4: The service identifier is allocated by the applet until it explicitly releases it.
- CRRN5: When an applet allocates a service identifier, it can issue the proactive command DECLARE SERVICE to add or delete a service to the terminal service database.

5.2.8.13.1.2 Parameter errors

No requirements.

5.2.8.13.1.3 Context errors

- CRRC1: Shall throw a ToolkitException with reason NO_SERVICE_ID_AVAILABLE if all the services are allocated.
- CRRC2: Shall throw a ToolkitException with reason NO_SERVICE_ID_AVAILABLE if the maximum number of services Identifiers have been allocated to this applet according to installation parameter.

5.2.8.13.2 Test area files

Test Source: Test_Api_2_Tkr_Asid.java.

Test Applet: Api_2_Tkr_Asid_1.java: 8 services.

Api_2_Tkr_Asid_2.java: 4 services.

Api_2_Tkr_Asid_3.java: 0 services.

Cap File: api_2_tkr_asid.cap.

5.2.8.13.3 Test coverage

CRR number	Test case number	
N1	1	
N2	1	
N3	2	
N4	2	
N5	Cat Runtime Environment, Cre_Pcs_Pcco	
C1	3	
C2	4	

5.2.8.13.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Allocates up to 8 services (Applet1)		
	Applet1 is triggered by an envelope(EVENT_MENU_SELECTION) with Item = 01. Call 8 times: - allocateServiceIdentifier() - send associated DECLARE SERVICE - isEventSet (EVENT EVENT DOWNLOAD LOCAL CONNECTION).	No exception shall be thrown. Service ID returned shall be between 00 and 07 inclusive. It shall be different after each call. Shall return true.	
2	Check Applet1 is triggered by envelope (EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTI		
	ON) command		
	1- Send 8 envelopes (EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION) with all services id (not in an increase order).	1- Applet1 shall be triggered each time.	
	2- Call releaseServiceIdentifier(id) with all services.	3- returns false.	
	3- Call isEventSet (EVENT EVENT DOWNLOAD LOCAL CONNECTION) method		

ld	Description	API Expectation	APDU Expectation
3	Allocate services more than the maximum		
	Applet1 is triggered by an envelope(EVENT_MENU_SELECTION) with Item = 01. 1- Applet1 calls 5 times allocateServiceIdentifier() method	1- No exception shall be thrown. Each time, the returned service identifier shall be between '00' and '07' inclusive. It shall be different after each call.	
	Applet2 is triggered by an envelope(EVENT_MENU_SELECTION) with Item = 02 2- Applet2 calls 3 times allocateServiceIdentifier() method	Applet1 finalizes. 2- No exception shall be thrown. Each time, the returned service identifier shall be between '00' and '07' inclusive. It shall be different after each call it shall be different from the ones allocated to Applet1.	
	3- Applet2 calls 1 more allocateServiceIdentifier() method Applet1 is triggered by an envelope(EVENT_MENU_SELECTION) with Item = 01. 4- Applet1 releases all its services.	3- A ToolkitException with reason NO_SERVICE_ID_AVAILABLE shall be thrown Applet2 finalizes.	
		4- No exception is thrown. Applet1 finalizes.	
4	Allocate services more than the maximum to this	, , , , , , , , , , , , , , , , , , , ,	
	applet (Applet3 and Applet2)		
	Applet3 is triggered by an envelope(EVENT_MENU_SELECTION) with Item = 03 1- Applet3 calls allocateServiceIdentifier() method.	1- A ToolkitException with reason NO_SERVICE_ID_AVAILABLE shall be thrown Applet3 finalizes.	
	Applet2 is triggered by an envelope(EVENT_MENU_SELECTION) with Item = 02 2- Applet2 calls allocateServiceIdentifier() method 3- Applet2 calls allocateServiceIdentifier() again	2- No exception shall be thrown. 3- A ToolkitException with reason NO_SERVICE_ID_AVAILABLE shall be thrown	

5.2.8.14 Method releaseServiceIdentifier

Test Area Reference: Api_2_Tkr_Rsid.

5.2.8.14.1 Conformance requirement

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

5.2.8.14.1.1 Normal execution

- CRRN1: Release a Service Identifier that has been allocated to the calling applet.
- CRRN2: The applet is deregistered of EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION for the indicated service identifier.

5.2.8.14.1.2 Parameter errors

• CRRP1: shall throw a ToolkitException with INVALID_SERVICE_ID reason if the service identifier is not between 0 and 7.

5.2.8.14.1.3 Context errors

• CRRC1: shall throw a ToolkitException with INVALID_SERVICE_ID reason if the service is not allocated to this applet.

5.2.8.14.2 Test area files

Test Source: Test_Api_2_Tkr_Rsid.java.

Test Applet: Api_2_Tkr_Rsid_1.java: 8 services.

Api_2_Tkr_Rsid_2.java: 1 service.

Cap File: api_2_tkr_rsid.cap.

5.2.8.14.3 Test coverage

CRR number	Test case number
N1	4, 5, 6
N2	2, 3, 4, 7
P1	1, 3
C1	8

5.2.8.14.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Release not allocated services Applet1 is triggered by envelope(EVENT_MENU_SELECTION) with Item = 1 For each service ID ranging from '00' to 'FF', applet calls releaseServiceIdentifier(ID)	Each time, method shall throw a ToolkitException with reason code INVALID_SERVICE_ID.	
2	Release allocated services 1- Call 8 times allocateServiceIdentifier() method.	1- No exception shall be thrown.	
	2- Call 7 times releaseServiceIdentifier(id) method with id from 0 to 6.	2- Each time, no exception shall be thrown.	
	3- Call isEventSet(EVENT_EVENT_DOWNLOAD_LOCAL_CONN ECTION)	3- Shall return true	
3	Release invalid service ID 1- Call releaseServiceIdentifier('FF') method 2- Call isEventSet(EVENT_EVENT_DOWNLOAD_LOCAL_CONN ECTION) method	1- Shall throw a ToolkitException with INVALID_SERVICE_ID reason code. 2- Shall return true.	
4	Release last service		
	1- Call releaseServiceIdentifier() method with id = `07' 2- Call isEventSet(EVENT_EVENT_DOWNLOAD_LOCAL_CONN ECTION)	No exception shall be thrown. Shall return false.	

ld	Description	API Expectation	APDU Expectation
5	Released services can be allocated	-	-
	<pre>1- Applet1 calls 8 times allocateServiceIdentifier() method. 2- Applet1 calls</pre>	1- No exception shall be thrown.	
	releaseServiceIdentifier() method with the service Id = 1	2- No exception shall be thrown.	
		Applet1 finalizes	
	Applet2 is triggered by envelope(EVENT_MENU_SELECTION) with Item = 2 3- Applet2 calls		
	allocateServiceIdentifier() method.	3- No exception shall be thrown, the service Id allocated shall be 1	
6	Release all services		
	Applet1 is triggered by envelope(EVENT_MENU_SELECTION) with Item = 1 Applet1 calls releaseServiceIdentifier(id) method for id 0 and 2 to 7.	No exception shall be thrown. Applet1 finalizes.	
7	Check Applet1 is not triggered by envelope(EVENT_EVENT_DOWNLOAD_LOCAL _CONNECTION) command Send envelope (EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION)	ENVELOPE(EVENT_EVENT_DO WNLOAD_LOCAL_CONNECTION) command.	
8	Release invalid service ID		
	Applet1 is triggered by envelope(EVENT_MENU_SELECTION) with Item = 1 1- Applet1 calls allocateServiceIdentifier() method 7 times. 2- Applet1 calls releaseServiceIdentifier() method with id = '01'	1- No exception shall be thrown, the services Id shall be different from 01 2- Shall throw a ToolkitException with INVALID_SERVICE_ID reason code.	

5.2.8.15 Method registerFileEvent(short event, byte[] baFileList, short sOffset1, short sLength1, byte[] baADFAid, short sOffset2, byte bLength2)

Test Area Reference: Api_2_Tkr_Rgfes_Bss_Bsb.

5.2.8.15.1 Conformance requirement

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

5.2.8.15.1.1 Normal execution

- CRRN1: The only event allowed and supported by the method is EVENT EXTERNAL FILE UPDATE.
- CRRN2: The CAT Runtime Environment shall trigger the applet when a elementary file included in the baFileList is updated.
- CRRN3: If the path provided indicates a dedicated file (DF), the Applet shall be triggered when an elementary file within this dedicated file is updated.
- CRRN4: The baADFAid indicates the Aid of the ADF under which the file is located.
- CRRN5: If baADFAid is null, it indicates that the file is located under the MF and not located under an ADF.
- CRRN6: A call to isEventSet() method for EVENT_EXTERNAL_FILE_UPDATE should return true if the
 registerFileEvent() method has been successfully called.

5.2.8.15.1.2 Parameter errors

- CRRP1: Shall throw a java.lang.NullPointerException if baFileList is null.
- CRRP2: Shall throw a java.lang.ArrayIndexOutOfBoundsException if sOffset1 or sLength1 or both would
 cause access outside array bounds.
- CRRP3: Shall throw a java.lang.ArrayIndexOutOfBoundsException if sOffset2 or sLength2 or both would cause access outside array bounds.
- CRRP4: Shall throw a javacard.framework.TransactionException if the operation would cause the commit capacity to be exceeded.
- CRRP5: Shall throw a javacard.framework.SystemException with ILLEGAL_VALUE reason if bLength2 is not in the range of 5 bytes to 16 bytes.
- CRRP6: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_MENU_SELECTION.
- CRRP7: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_MENU_SELECTION_HELP_REQUEST.
- CRRP8: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_TIMER_EXPIRATION.
- CRRP9: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_STATUS_COMMAND.
- CRRP10: Shall throw a ToolkitException with EVENT_NOT_SUPPORTED reason if the event is not EVENT_EXTERNAL_FILE_UPDATE.

5.2.8.15.1.3 Context errors

No requirements.

5.2.8.15.2 Test area files

Test Source: Test_Api_2_Tkr_Rgfes_Bss_Bsb.java.

Test Applet: Api_2_Tkr_Rgfes_Bss_Bsb_1.java.

Cap File: api_2_tkr_rgfes_bss_bsb.cap.

5.2.8.15.3 Test coverage

CRR number	Test case number	
N1	1, 2, 3, 4	
N2	1, 3, 21, 22, 23, 24	
N3	2, 4	
N4	3, 4	
N5	1, 2	
N6	1	
P1	5	
P2	6, 7, 8, 9, 10	
P3	11,12,13,14	
P4	Not testable	
P5	15	
P6	16	
P7	17	
P8	18	
P9	19	
P10	20	

5.2.8.15.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Register EF under MF		
	1- Call isEventSet (EVENT_EXTERNAL_FILE_UPDATE) method	1- Returns false	
	2- Call registerFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE	2- No exception is thrown	
	baFileList="02 3F0011116F03 3F0011116F09" baADFAid=null	3- Returns true	
	3- Call isEventSet (EVENT_EXTERNAL_FILE_UPDATE) method		
	4- Update binary on MF\DFTEST\EFTARU	4- Applet is triggered	
	5- Increase on MF\DFTEST\EFCARU	5- Applet is triggered	
	6- Update record on MF\DFTEST\EFLARU	6- Applet is not triggered	
	7- Update binary on MF\DFTEST\ DFSUB_TEST\EFTAA	7- Applet is not triggered	
	8- Call deregisterFileEvent() method with parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE		
	baFileList="02 3F0011116F03 3F0011116F09" baADFAid=null		

ld	Description	API Expectation	APDU Expectation
2	Register DF under MF		
_	1- Call registerFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F001111" baADFAid=null	1- No exception is thrown	
	2- Update binary on MF\DFTEST\EFTARU 3- Increase on MF\DFTEST\EFCARU 4- Update record on MF\DFTEST\EFLARU 5- Update binary on MF\DFTEST\ DFSUB_TEST\EFTAA 6- Call deregisterFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F001111" baADFAid=null	2- Applet is triggered3- Applet is triggered4- Applet is triggered5- Applet is not triggered	
3	Register EF under ADF1		
	1- Call registerFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="02 3F007FFF11116F03 3F007FFF11116F09" baADFAid="AID ADF1"	1- No exception is thrown	
	2- Update binary on ADF1\DFTEST\EFTARU	2- Applet is triggered	
	3- Increase on ADF1\DFTEST\EFCARU	3- Applet is triggered	
	4- Update record on ADF1\DFTEST\EFLARU	4- Applet is not triggered	
	5- Update binary on ADF1\DFTEST\ DFSUB_TEST\EFTAA	5- Applet is not triggered	
	6- Call deregisterFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="02 3F007FFF11116F03 3F007FFF11116F09" baADFAid="AID ADF1"		
4	Register DF under ADF1		
	1- Call registerFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F007FFF1111" baADFAid="AID ADF1"	1- No exception is thrown	
	2- Update binary on ADF1\DFTEST\EFTARU	2- Applet is triggered	
	3- Increase on ADF1\DFTEST\EFCARU	3- Applet is triggered	
	4- Update record on ADF1\DFTEST\EFLARU	4- Applet is triggered	
	5- Update binary on ADF1\DFTEST\ DFSUB_TEST\EFTAA	5- Applet is not triggered	
	6- Call deregisterFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F007FFF1111" baADFAid="AID ADF1"	6- No exception is thrown	
		I	<u> </u>

ld	Description	API Expectation	APDU Expectation
5	NullPointerException Exception	7.1. Expodution	7 20 Exposition
"	Train onto Exception Exception	Chall throw a NullDeinterFree C	
	Call registerFileEvent() method with null baFileList	Shall throw a NullPointerException	
6	sOffset1 >= baFileList.length		
	Call registerFileEvent() method with baFileList.length = 8 sOffset1 = 8	Shall throw a ArrayIndexOutOfBoundsException	
	sLength1 = 4		
7	sOffset1 < 0		
	Call registerFileEvent() method with baFileList.length = 8 sOffset1 = -1 sLength1 = 4	Shall throw a ArrayIndexOutOfBoundsException	
8	sLength1 > baFileList.length		
	Call registerFileEvent() method with baFileList.length = 8 sOffset1 = 0 sLength1 = 10	Shall throw a ArrayIndexOutOfBoundsException	
9	sOffset1 + sLength1 > baFileList.length		
	Call registerFileEvent() method with baFileList.length = 8 sOffset1 = 5 sLength1 = 4	Shall throw a ArrayIndexOutOfBoundsException	
10	sLength1 < 0		
	Call registerFileEvent() method with baFileList.length = 8 sOffset1 = 0 sLength1 = -1	Shall throw a ArrayIndexOutOfBoundsException	
11	sOffset2 >= baFileList.length		
	Call registerFileEvent() method with baADFAid.length = 15 sOffset2 = 15 bLength2 = 6	Shall throw a ArrayIndexOutOfBoundsException	
12	sOffset2 < 0		
	Call registerFileEvent() method with baADFAid.length = 15 sOffset2 = -1 bLength2 = 6	Shall throw a ArrayIndexOutOfBoundsException	
13	sLength2 > baFileList.length		
	Call registerFileEvent() method with baADFAid.length = 15 sOffset2 = 0 bLength2 = 16	Shall throw a ArrayIndexOutOfBoundsException	
14	sOffset2 + sLength2 > baFileList.length		
	Call deregisterFileEvent() method with baADFAid.length = 15 sOffset1 = 10 bLength1 = 6	Shall throw a ArrayIndexOutOfBoundsException	
15	ILLEGAL_VALUE Exception		
	1- Call registerFileEvent() method with baADFAid.length = 18 sOffset2 = 0 bLength2 = 4	1- Shall throw a SystemException with ILLEGAL_VALUE reason code	
	2- Call registerFileEvent() method with baADFAid.length = 18 sOffset2 = 0 bLength2 = 18	2- Shall throw a SystemException with ILLEGAL_VALUE reason code	
16	EVENT_MENU_SELECTION not allowed	Shall throw a ToolkitException with	
	Call registerFileEvent() method with event=EVENT_MENU_SELECTION	EVENT_NOT_ALLOWED reason code	

ld	Description	API Expectation	APDU Expectation
17	EVENT_MENU_SELECTION_HELP_REQUEST	·	•
	not allowed	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason code	
	Call registerFileEvent() method with event= EVENT MENU SELECTION HELP REQUEST	Code	
18	EVENT_TIMER_EXPIRATION not allowed	Shall throw a ToolkitException with	
	Call registerFileEvent() method with event=EVENT TIMER EXPIRATION	EVENT_NOT_ALLOWED reason code	
19	EVENT_STATUS_COMMAND not allowed	Shall throw a ToolkitException with	
	Call registerFileEvent() method with event=EVENT STATUS COMMAND	EVENT_NOT_ALLOWED reason code	
20	EVENT_NOT_SUPPORTED Exception	Shall throw a ToolkitException with	
	Call registerFileEvent() method with event=EVENT PROFILE DOWNLOAD	EVENT_NOT_SUPPORTED reason code	
21	Register a deleted and recreated EF under MF		
	1- Call registerFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F0011116F03" baADFAid=null	1- No exception is thrown	
	2- Update binary on MF\DFTEST\EFTARU		
	3- Delete MF\DFTEST\EFTARU	2- Applet is triggered	
	4- Create MF\DFTEST\EFTARU		
	5- Update binary on MF\DFTEST\EFTARU	5- Applet is triggered	
	6- Call deregisterFileEvent() method with parameters:		
	parameters. event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F0011116F03" baADFAid=null		
22	Register a deleted and recreated DF under MF		
	1- Call registerFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F0011112211" baADFAid=null	1- No exception is thrown	
	2- Update binary on MF\DFTEST\DFSUB_TEST\EFTAA	2- Applet is triggered	
	3- Delete DFSUB_TEST		
	4- Create DFSUB_TEST, create EFTAA		
	5- Update binary on MF\DFTEST\DFSUB_TEST\EFTAA	5- Applet is triggered	
	6- Call deregisterFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F0011112211" baADFAid=null		

ld	Description	API Expectation	APDU Expectation
23	Register a non existing EF under MF		
	1- Call registerFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F00111122112223" baADFAid=null	1- No exception is thrown	
	2- Create MF\DFTEST\DFSUB_TEST\EFTNEW (2223)		
	3- Update binary on MF\DFTEST\DFSUB_TEST\EFTNEW	3- Applet is triggered	
	4- Call deregisterFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F00111122112223" baADFAid=null		
	5- Delete MF\DFTEST\DFSUB TEST\EFTNEW		
24	Register a non existing DF under MF 1- Call registerFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F0011112212" baADFAid=null	1- No exception is thrown	
	2- Create MF\DFTEST\DFNEW (2212)		
	3- Create MF\DFTEST\DFNEW\EFTNEW 4- Update binary on MF\DFTEST\DFNEW\EFTNEW	4- Applet is triggered	
	5- Call deregisterFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F0011112212" baADFAid=null	5- Applet is triggered	
	6- Delete MF\DFTEST\DFNEW		
	7-Restore EFs		

NOTE: Complementary information about tests 21, 22, 23, 24 can be found in document SCPt040568 in ETSI web site.

5.2.8.16 Method registerFileEvent(short event, FileView aFileView)

Test Area Reference: Api_2_Tkr_RgfeSo.

5.2.8.16.1 Conformance requirement

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

5.2.8.16.1.1 Normal execution

- CRRN1: The only event allowed and supported by the method is EVENT_EXTERNAL_FILE_UPDATE.
- CRRN2: The CAT Runtime Environment shall trigger the applet when the aFileView object's current file is updated.

- CRRN3: If the aFileView object's current file is a dedicated file, the Applet shall be triggered when an elementary file within this dedicated file is updated.
- CRRN4: A later change in the FileView shall not modify the registration.
- CRRN5: A call to isEventSet() method for EVENT_EXTERNAL_FILE_UPDATE should return true if the
 registerFileEvent() method has been successfully called.

5.2.8.16.1.2 Parameter errors

- CRRP1: Shall throw a java.lang.NullPointerException if aFileView is null.
- CRRP2: Shall throw a javacard.framework.TransactionException if the operation would cause the commit capacity to be exceeded.
- CRRP3: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_MENU_SELECTION.
- CRRP4: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_MENU_SELECTION_HELP_REQUEST.
- CRRP5: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_TIMER_EXPIRATION.
- CRRP6: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_STATUS_COMMAND.
- CRRP7: Shall throw a ToolkitException with EVENT_NOT_SUPPORTED reason if the event is not EVENT_EXTERNAL_FILE_UPDATE.

5.2.8.16.1.3 Context errors

No requirements.

5.2.8.16.2 Test area files

Test Source: Test_Api_2_Tkr_RgfeSo.java.

Test Applet: Api_2_Tkr_RgfeSo _1.java.

Cap File: api_2_tkr_rgfeso.cap.

5.2.8.16.3 Test coverage

CRR number	Test case number	
N1	1, 2, 3, 4	
N2	1, 3, 11, 12	
N3	2, 4	
N4	1, 3	
N5	1	
P1	5	
P2	Not testable	
P3	6	
P4	7	
P5	8	
P6	9	
P7	10	

5.2.8.16.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Register EF under MF	·	-
	1- Call isEventSet (EVENT_EXTERNAL_FILE_UPDATE) method	1- Returns false	
	2- Call UICCView=getTheUICCView()		
	3- Applet selects MF\DFTEST\EFTARU.		
	4- Call registerFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE aFileView = UICCView		
	5- Update binary on MF\DFTEST\EFTARU	5- Applet is triggered	
	6- Call isEventSet (EVENT_EXTERNAL_FILE_UPDATE) method		
	7- Applet selects EFCARU.		
	8- Call registerFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE aFileView = UICCView	6- Returns true	
	9- Update binary on MF\DFTEST\EFTARU 10- Increase on MF\DFTEST\EFCARU	8- No exception is thrown	
	11- Update record on MF\DFTEST\EFLARU 12- Update binary on MF\DFTEST\	9- Applet is triggered	
	DFSUB_TEST\EFTAA	10- Applet is triggered	
	13- Call deregisterFileEvent() method with parameters:	1	
	<pre>event= EVENT_EXTERNAL_FILE_UPDATE aFileView = UICCView</pre>	12- Applet is not triggered	
	14- Applet selects MF\DFTEST\EFTARU.	33	
	15- Call deregisterFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE aFileView = UICCView		

ld	Description	API Expectation	APDU Expectation
2	Register DF under MF		
	1- Applet selects MF\DFTEST.	2- No exception is thrown	
	2- Call registerFileEvent() method with parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE aFileView = UICCView		
	3- Update binary on MF\DFTEST\EFTARU	3- Applet is triggered	
	4- Increase on MF\DFTEST\EFCARU	4- Applet is triggered	
	5- Update record on MF\DFTEST\EFLARU	5- Applet is triggered	
	6- Update binary on MF\DFTEST\ DFSUB_TEST\EFTAA	6- Applet is not triggered	
	7- Applet selects MF\DFTEST		
	8- Call deregisterFileEvent() method with parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE aFileView = UICCView		
3	Register EF under ADF1		
	Gall ADDIVious combability out		
	1- Call ADF1View=getTheFileView() 2- Applet selects ADF1\DFTEST\EFTARU.		
	3- Call registerFileEvent() method with	3- No exception is thrown	
	parameters: event= EVENT_EXTERNAL_FILE_UPDATE aFileView = ADF1View		
	4- Update binary on ADF1\DFTEST\EFTARU	4- Applet is triggered	
	5- Applet selects ADF1\DFTEST\EFCARU.		
	6- Call registerFileEvent() method with parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE aFileView = ADF1View	6- No exception is thrown	
	7- Update binary on ADF1\DFTEST\EFTARU		
	8- Increase on ADF1\DFTEST\EFCARU	7- Applet is triggered	
	9- Update record on ADF1\DFTEST\EFLARU	8- Applet is triggered	
	10- Update binary on ADF1\DFTEST\ DFSUB_TEST\EFTAA	9- Applet is not triggered	
	11- Applet selects ADF1\DFTEST\EFCARU.	10- Applet is not triggered	
	12- Call deregisterFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE aFileView = ADF1View		
	13- Applet selects ADF1\DFTEST\EFTARU.		
	14- Call deregisterFileEvent() method with parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE aFileView = ADF1View		

ld	Description	API Expectation	APDU Expectation
4	Register DF under ADF1		= c = rpermisi
	1- Applet selects DFTEST.		
	1- Appret serects Drimsi.		
	<pre>2- Call registerFileEvent() method with parameters:</pre>	2- No exception is thrown	
	event= EVENT_EXTERNAL_FILE_UPDATE	·	
	aFileView = ADF1View		
	3- Update binary on ADF1\DFTEST\EFTARU	3- Applet is triggered	
	4- Increase on ADF1\DFTEST\EFCARU	4- Applet is triggered	
	5- Update record on ADF1\DFTEST\EFLARU	5- Applet is triggered	
	6- Update binary on ADF1\DFTEST\ DFSUB TEST\EFTAA		
	7- Applet selects ADF1\DFTEST	6- Applet is not triggered	
	<pre>8- Call deregisterFileEvent() method with parameters:</pre>		
	event= EVENT_EXTERNAL_FILE_UPDATE aFileView = ADF1View		
5	NullPointerException Exception		
	Call registerFileEvent() method with null aFileView	Shall throw a NullPointerException	
6	EVENT_MENU_SELECTION not allowed	Shall throw a ToolkitException with	
	Call registerFileEvent() method with	EVENT_NOT_ALLOWED reason	
	event=EVENT_MENU_SELECTION	code	
7	EVENT_MENU_SELECTION_HELP_REQUEST	Shall throw a ToolkitException with	
	not allowed	EVENT_NOT_ALLOWED reason	
	Call registerFileEvent() method with	code	
8	EVENT_TIMER_EXPIRATION not allowed	0. 11.1	
		Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason	
	Call registerFileEvent() method with event=EVENT TIMER EXPIRATION	code	
9	EVENT_STATUS_COMMAND not allowed	Shall throw a ToolkitException with	
		EVENT_NOT_ALLOWED reason	
	Call registerFileEvent() method with event=EVENT STATUS COMMAND	code	
10	EVENT_NOT_SUPPORTED Exception	Shall throw a ToolkitException with	
	Call registerFileEvent() method with	EVENT_NOT_SUPPORTED	
	event=EVENT_PROFILE_DOWNLOAD	reason code	
11	Register a deleted and recreated EF under ADF		
	1- Applet selects ADF1\DF _{TEST} \EF _{TARU}		
	2- Call registerFileEvent() method with		
	parameters: event= EVENT EXTERNAL FILE UPDATE	2- No exception is thrown	
	aFileView = ADF1View		
	3- Update binary on ADF1\DF $_{\text{TEST}}$ \EF $_{\text{TARU}}$		
	4- Delete ADF1\DF $_{\mathrm{TEST}}$ \EF $_{\mathrm{TARU}}$	3- Applet is triggered	
	5- Create ADF1\DF _{TEST} \EF _{TARU}		
	6- Update binary on ADF1\DF $_{\text{TEST}}$ \EF $_{\text{TARU}}$		
	7- Call deregisterFileEvent() method with	6- Applet is triggered	
	parameters: event= EVENT EXTERNAL FILE UPDATE		
	aFileView = ADF1View		

ld	Description	API Expectation	APDU Expectation
12	Register a deleted and recreated DF under ADF		
	1- Applet selects ADF1\DF _{TEST} \DF _{SUB_TEST}	2- No exception is thrown	
	<pre>2- Call registerFileEvent() method with parameters:</pre>		
	event= EVENT_EXTERNAL_FILE_UPDATE aFileView = ADF1View		
	3- Update binary on ADF1\DF_{TEST}\ $\rm DF_{SUB_TEST} \backslash EF_{TAA}$	3- Applet is triggered	
	4- Delete EF $_{\text{TAA}}$, delete DF $_{\text{SUB_TEST}}$		
	5- Create DF_{SUB_TEST} , create EF_{TAA}		
	6- Update binary on ADF1\DF _{TEST} \	6- Applet is triggered	
	$DF_{SUB_TEST} \backslash EF_{TAA}$	a chhiat ia migaraa	
	7- Applet selects ADF1\DF $_{\text{TEST}}$ \ DF $_{\text{SUB_TEST}}$		
	8- Call deregisterFileEvent() method with		
	parameters: event= EVENT EXTERNAL FILE UPDATE		
	aFileView = ADF1View		
	9- Restore EFs		

NOTE: Complementary information about tests 11, 12 can be found in document SCPt040568 in ETSI web site.

5.2.8.17 Method deregisterFileEvent(short event, byte[] baFileList, short sOffset1, short sLength1, byte[] baADFAid, short sOffset2, byte bLength2)

Test Area Reference: Api_2_Tkr_Drfes_Bss_Bsb.

5.2.8.17.1 Conformance requirement

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

5.2.8.17.1.1 Normal execution

- CRRN1: The only event allowed and supported by the method is EVENT_EXTERNAL_FILE_UPDATE.
- CRRN2: The applet is deregistered to the file included in the baFileList.
- CRRN3: If a file in baFileList is a dedicated file the deregistration shall not affect the monitoring of an elementary file within the dedicated file that was individually registered.
- CRRN4: If a file in baFileList is an elementary file the deregistration will not affect the monitoring of the parent dedicated file that was individually registered.
- CRRN5: The baADFAid indicates the Aid of the ADF under which the file is located.
- CRRN6: If baADFAid is null, it indicates that the file is located under the MF and not located under an ADF.

• CRRN7: A call to isEventSet() method for EVENT_EXTERNAL_FILE_UPDATE should return false if the applet has been deregistered completely to all its registered EFs and DFs.

5.2.8.17.1.2 Parameter errors

- CRRP1: Shall throw a java.lang.NullPointerException if baFileList is null.
- CRRP2: Shall throw a java.lang.ArrayIndexOutOfBoundsException if sOffset1 or sLength1 or both would cause access outside array bounds.
- CRRP3: Shall throw a java.lang.ArrayIndexOutOfBoundsException if sOffset2 or sLength2 or both would cause access outside array bounds.
- CRRP4: Shall throw a javacard.framework.TransactionException if the operation would cause the commit capacity to be exceeded.
- CRRP5: Shall throw a javacard.framework.SystemException with ILLEGAL_VALUE reason if bLength2 is not in the range of 5 - 16 bytes.
- CRRP6: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_MENU_SELECTION.
- CRRP7: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_MENU_SELECTION_HELP_REQUEST.
- CRRP8: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_TIMER_EXPIRATION.
- CRRP9: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_STATUS_COMMAND.
- CRRP10: Shall throw a ToolkitException with EVENT_NOT_SUPPORTED reason if the event is not EVENT_EXTERNAL_FILE_UPDATE.

5.2.8.17.1.3 Context errors

No requirements.

5.2.8.17.2 Test area files

Test Source: Test_Api_2_Tkr_Drfes_Bss_Bsb.java.

Test Applet: Api_2_Tkr_Drfes_Bss_Bsb_1.java.

Cap File: api_2_tkr_drfes_bss_bsb.cap.

5.2.8.17.3 Test coverage

CRR number	Test case number
N1	1, 2, 3, 4, 5, 6
N2	1, 4
N3	2, 5
N4	3, 6
N5	4, 5, 6
N6	1, 2, 3
N7	1
P1	7
P2	8, 9, 10, 11, 12
P3	13, 14, 15, 16
P4	Not testable
P5	17
P6	18
P7	19
P8	20
P9	21
P10	22

5.2.8.17.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Deregister EF under MF		
	1- Call isEventSet (EVENT_EXTERNAL_FILE_UPDATE) method	1- Returns false	
	2- Call registerFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="03 3F0011116F03 3F0011116F09 3F0011116F0C" baADFAid=null		
	3- Update binary on MF\DF _{TEST} \EF _{TARU}	3- Applet is triggered	
	4- Increase on MF\DF $_{\text{TEST}}$ \EF $_{\text{CARU}}$	4- Applet is triggered	
	5- Update record on MF\DF $_{\text{TEST}}$ \EF $_{\text{LARU}}$	5- Applet is triggered	
	6- Call deregisterFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="02 3F0011116F03 3F0011116F09" baADFAid=null	6- No exception is thrown	
	7- Update binary on MF\DF $_{\text{TEST}}$ \EF $_{\text{TARU}}$		
	8- Increase on MF\DF $_{\text{TEST}}$ \EF $_{\text{CARU}}$	7- Applet is not triggered	
	9- Update record on MF\DF $_{\mathtt{TEST}}$ \EF $_{\mathtt{LARU}}$	8- Applet is not triggered	
	10- Call isEventSet (EVENT_EXTERNAL_FILE_UPDATE) method	9- Applet is triggered	
	11- Call deregisterFileEvent() method with parameters:	10- Returns true	
	baFileList="01 3F0011116F0C" baADFAid=null	11- No exception is thrown	
	12- Update record on MF\DF _{TEST} \EF _{LARU} 13- Call isEventSet	12- Applet is not triggered	
	(EVENT_EXTERNAL_FILE_UPDATE) method	13- Returns false	

ld	Description	API Expectation	APDU Expectation
2	Deregister DF does not affect child EF	·	'
	1- Call registerFileEvent() method with		
	parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE		
	baFileList="02 3F0011116F03 3F001111"		
	baADFAid=null	2- Applet is triggered	
	2- Update binary on MF\DF _{TEST} \EF _{TARU}	2 / ipplot is triggered	
	T T T T T T T T T T T T T T T T T T T	3- No exception is thrown	
	3- Call deregisterFileEvent() method with		
	parameters: event= EVENT EXTERNAL FILE UPDATE		
	baFileList="01 3F001111"		
	baADFAid=null		
	4- Update binary on MF\DF _{TEST} \EF _{TARU}	4- Applet is triggered	
3	Deregister EF does not affect parent DF	The string of th	
~	Dorogistor II doos not anost paront 21		
	1- Call registerFileEvent() method with		
	parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F001111"		
	baADFAid=null	2- Applet is triggered	
		11 11 33 33	
	2- Update binary on MF\DF _{TEST} \EF _{TARU}	3- No exception is thrown	
	3- Call deregisterFileEvent() method with		
	parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F0011116F03"		
	baADFAid=null		
		4- Applet is triggered	
	4- Update binary on MF\DF _{TEST} \EF _{TARU}	5- Applet is triggered	
	5- Update record on MF\DF _{TEST} \EF _{LARU}		

ld	Description	API Expectation	APDU Expectation
4	Deregister EF under ADF1		•
	1- Call isEventSet	1- Returns false	
	(EVENT_EXTERNAL_FILE_UPDATE) method		
	2- Call registerFileEvent() method with		
	parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE		
	baFileList="03 3F007FFF11116F03 3F007FFF11116F09 3F007FFF11116F0C"		
	baADFAid="AID ADF1"		
	3- Update binary on $MF\DF_{TEST}\EF_{TARU}$	3- Applet is triggered	
	4- Increase on MF\DF _{TEST} \EF _{CARU}	4- Applet is triggered	
	5- Update record on MF\DF _{TEST} \EF _{LARU}	5- Applet is triggered	
		Tippiet is aliggered	
	6- Call deregisterFileEvent() method with	6- No exception is thrown	
	<pre>parameters: event= EVENT_EXTERNAL_FILE_UPDATE</pre>		
	baFileList="02 3F007FFF11116F03		
	3F007FFF11116F09" baADFAid="AID ADF1"		
	DAADFAIG= AID ADFI	7- Applet is not triggered	
	7- Update binary on MF\DF _{TEST} \EF _{TARU}	/ Applet is not triggered	
	8- Increase on MF\DF _{TEST} \EF _{CARU}	8- Applet is not triggered	
	9- Update record on MF\DF _{TEST} \EF _{LARU}	9- Applet is triggered	
		10- Returns true	
	10- Call isEventSet (EVENT EXTERNAL FILE UPDATE) method		
		11- No exception is thrown	
	11- Call deregisterFileEvent() method with parameters:	11- NO exception is thown	
	event= EVENT_EXTERNAL_FILE_UPDATE		
	baFileList="01 3F007FFF11116F0C" baADFAid="AID ADF1"		
	DAADFAIG= AID ADFI	12- Applet is not triggered	
	12- Update record on MF\DF _{TEST} \EF _{LARU}	72 Applet is not inggered	
	13- Call isEventSet	13- Returns false	
_	(EVENT_EXTERNAL_FILE_UPDATE) method		
5	Deregister DF does not affect child EF (under ADF1)		
	1- Call registerFileEvent() method with		
	parameters:		
	<pre>event= EVENT_EXTERNAL_FILE_UPDATE baFileList="02 3F007FFF11116F03 3F001111"</pre>		
	baADFAid="AID ADF1"	2- Applet is triggered	
	2- Update binary on MF\DFTEST\EFTARU	3- No exception is thrown	
	3- Call deregisterFileEvent() method with parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE		
	baFileList="01 3F007FFF1111"		
	baADFAid="AID ADF1"	4- Applet is triggered	
	4- Update binary on MF\DFTEST\EFTARU	The triggered	
	1	<u>i</u>	

ld	Description	API Expectation	APDU Expectation
6	Deregister EF does not affect parent DF (under		Al Do Expediation
	ADF1)		
	7.5,	1- No exception is thrown	
	1- Call registerFileEvent() method with		
	parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE baFileList="01 3F007FFF1111"		
	baADFAid="AID ADF1"		
		2- Applet is triggered	
	2- Update binary on MF\DF $_{\text{TEST}}$ \EF $_{\text{TARU}}$	11 33	
	3- Call deregisterFileEvent() method with	3- No exception is thrown	
	parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE		
	baFileList="01 3F007FFF11116F03"		
	baADFAid="AID ADF1"		
	4- Update binary on MF\DF _{TEST} \EF _{TARU}	4. Applet is triggered	
	5- Update record on MF\DF _{TEST} \EF _{LARU}	4- Applet is triggered 5- Applet is triggered	
		7 Applet is triggered	
7	6- Restore EFS NullPointerException Exception		
'	NullFolliterException Exception		
	Call deregisterFileEvent() method with baFileList null	Shall throw a NullPointerException	
8	sOffset1 >= baFileList.length		
		Chall throws	
	Call deregisterFileEvent() method with baFileList.length = 7	Shall throw a	
	sOffset1 = 8	ArrayIndexOutOfBoundsException	
	sLength1 = 4		
9	sOffset1 < 0		
		Shall throw a	
	Call deregisterFileEvent() method with baFileList.length = 19	ArrayIndexOutOfBoundsException	
	sOffset1 = -1	/ traymacxoutorboanasexception	
	sLength1 = 4		
10	sLength1 > baFileList.length		
	Call deregisterFileEvent() method with	Shall throw a	
	baFileList.length = 7	ArrayIndexOutOfBoundsException	
	sOffset1 = 0		
44	sLength1 = 10		
11	sOffset1 + sLength1 > baFileList.length		
	Call deregisterFileEvent() method with	Shall throw a	
	baFileList.length = 7	ArrayIndexOutOfBoundsException	
	sOffset1 = 5		
12	sLength1 = 4 sLength1 < 0		
'-	SECHGUII < U		
	Call deregisterFileEvent() method with	Shall throw a	
	baFileList.length = 7	ArrayIndexOutOfBoundsException	
	sOffset1 = 0 sLength1 = -1		
13	substance = -1 sOffset2 >= baFileList.length		
'3	oonood /- but notionigut		
	Call deregisterFileEvent() method with	Shall throw a	
	<pre>baADFAid.length = 15 sOffset2 = 15</pre>	ArrayIndexOutOfBoundsException	
	bLength2 = 6		
14	sOffset2 < 0		
		Chall throws	
	Call deregisterFileEvent() method with baADFAid.length = 15	Shall throw a	
	sOffset2 = -1	ArrayIndexOutOfBoundsException	
	bLength2 = 6		
15	sLength2 > baFileList.length		
	Call damagist and illegate () mathed with	Shall throw a	
	Call deregisterFileEvent() method with baADFAid.length = 15	ArrayIndexOutOfBoundsException	
	sOffset2 = 0	, may mack out of bounds to be filled in	
	bLength2 = 16		

ld	Description	API Expectation	APDU Expectation
16	sOffset2+ sLength2 > baFileList.length		
	Call deregisterFileEvent() method with baADFAid.length = 15 sOffset1 = 10 bLength1 = 6	Shall throw a ArrayIndexOutOfBoundsException	
17	ILLEGAL_VALUE Exception		
	1- Call deregisterFileEvent() method with baADFAid.length = 18 sOffset2 = 0 bLength2 = 4	1- Shall throw a SystemException with ILLEGAL_VALUE reason code	
	2- Call deregisterFileEvent() method with baADFAid.length = 18 sOffset2 = 0 bLength2 = 18	2- Shall throw a SystemException with ILLEGAL_VALUE reason code	
18	EVENT_MENU_SELECTION not allowed Call deregisterFileEvent() method with	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason	
	event=EVENT_MENU_SELECTION	code	
19	EVENT_MENU_SELECTION_HELP_REQUEST not allowed	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason	
	Call deregisterFileEvent() method with event= EVENT MENU SELECTION HELP REQUEST	code	
20	EVENT_TIMER_EXPIRATION not allowed Call deregisterFileEvent() method with event=EVENT_TIMER_EXPIRATION	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason code	
21	EVENT_STATUS_COMMAND not allowed Call deregisterFileEvent() method with event=EVENT_STATUS_COMMAND	Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason code	
22	EVENT_NOT_SUPPORTED Exception Call deregisterFileEvent() method with event=EVENT_PROFILE_DOWNLOAD	Shall throw a ToolkitException with EVENT_NOT_SUPPORTED reason code	

5.2.8.18 Method deregisterFileEvent(short event, FileView aFileView)

Test Area Reference: Api_2_Tkr_Drfeso.

5.2.8.18.1 Conformance requirement

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

5.2.8.18.1.1 Normal execution

- CRRN1: The only event allowed and supported by the method is EVENT_EXTERNAL_FILE_UPDATE.
- CRRN2: The aFileView object's current file indicates the file that is no longer monitored. The applet is deregistered to the aFileView object's current file.
- CRRN3: If the current file is a dedicated file the deregistration shall not affect the monitoring of an elementary file within the dedicated file that was individually registered.
- CRRN4: If the current file is an elementary file the deregistration will not affect the monitoring of the parent dedicated file that was individually registered.
- CRRN5: A call to isEventSet() method for EVENT_EXTERNAL_FILE_UPDATE should return false if the applet has been deregistered completely to all its registered EFs and DFs.

5.2.8.18.1.2 Parameter errors

- CRRP1: Shall throw a java.lang.NullPointerException if aFileView is null.
- CRRP2: Shall throw a javacard.framework.TransactionException if the operation would cause the commit capacity to be exceeded.
- CRRP3: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_MENU_SELECTION.
- CRRP4: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT MENU SELECTION HELP REQUEST.
- CRRP5: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_TIMER_EXPIRATION.
- CRRP6: Shall throw a ToolkitException with EVENT_NOT_ALLOWED reason if the event is EVENT_STATUS_COMMAND.
- CRRP7: Shall throw a ToolkitException with EVENT_NOT_SUPPORTED reason if the event is not EVENT_EXTERNAL_FILE_UPDATE.

5.2.8.18.1.3 Context errors

No requirements.

5.2.8.18.2 Test area files

Test Source: Test_Api_2_Tkr_Drfeso.java.

Test Applet: Api_2_Tkr_Drfeso_1.java.

Cap File: api_2_tkr_drfeso.cap.

5.2.8.18.3 Test coverage

CRR number	Test case number
N1	1, 2, 3, 4, 5, 6
N2	1, 4
N3	2, 5
N4	3, 6
N5	1
P1	7
P2	Not testable
P3	8
P4	9
P5	10
P6	11
P7	12

5.2.8.18.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Deregister EF under MF	, and a second	P
	_		
	1- Call isEventSet (EVENT_EXTERNAL_FILE_UPDATE) method	1- Returns false	
	2- Call registerFileEvent() method with		
	<pre>parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="03 3F0011116F03 3F0011116F09 3F0011116F0C" baADFAid=null</pre>		
	3- Update binary on MF\DF _{TEST} \EF _{TARU}	3- Applet is triggered	
	4- Increase on MF\DF _{TEST} \EF _{CARU}	4- Applet is triggered	
	5- Update record on MF\DF _{TEST} \EF _{LARU}	5- Applet is triggered	
	6- Call UICCView=getTheUICCView()		
	7- Applet selects $\mathrm{EF}_{\mathrm{TARU}}$.		
	8- Call deregisterFileEvent() method with parameters:	8- No exception is thrown	
	event= EVENT_EXTERNAL_FILE_UPDATE aFileView = UICCView		
	9- Update binary on MF\DF _{TEST} \EF _{TARU}	9- Applet is not triggered	
	10- Applet selects EF _{CARU} .		
	<pre>11- Call deregisterFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE aFileView = UICCView</pre>	11- No exception is thrown	
	12- Increase on MF\DF _{TEST} \EF _{CARU}	12- Applet is not triggered	
	13- Call isEventSet (EVENT_EXTERNAL_FILE_UPDATE) method	13- Returns true	
	14- Applet selects $\mathrm{EF}_{\mathrm{LARU}}$.		
	15- Call deregisterFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE aFileView = UICCView	15- No exception is thrown	
	16- Update record on MF\DF _{TEST} \EF _{LARU}	16- Applet is not triggered	
	17- Call isEventSet (EVENT_EXTERNAL_FILE_UPDATE) method	17- Returns false	
2	Deregister DF does not affect child EF		
	1- Call registerFileEvent() method with parameters: event= EVENT_EXTERNAL_FILE_UPDATE baFileList="02 3F0011116F03 3F001111" baADFAid=null		
	2- Update binary on MF\DF _{TEST} \EF _{TARU}	2- Applet is triggered	
	3- Applet selects DF_{TEST} .		
	4- Call deregisterFileEvent() method with parameters: event= EVENT EXTERNAL FILE UPDATE	4- No exception is thrown	
	aFileView = UICCView		
	5- Update binary on MF\DF _{TEST} \EF _{TARU}	5- Applet is triggered	

ld	Description	API Expectation	APDU Expectation
3	Deregister EF does not affect parent DF	·	•
	1-Select DF _{TEST}		
	2- Call registerFileEvent() method with		
	parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE aFileView = UICCView	3- Applet is triggered	
	3- Update binary on MF\DF_TEST\EF_TARU		
	4- Applet selects $\mathrm{EF}_{\mathrm{TARU}}.$		
	5- Call deregisterFileEvent() method with parameters:	5- No exception is thrown	
	event= EVENT_EXTERNAL_FILE_UPDATE aFileView = UICCView		
	6- Update binary on MF\DF _{TEST} \EF _{TARU} 7- Update record on MF\DF _{TEST} \EF _{LARU}	6- Applet is triggered 7- Applet is triggered	
4	Deregister EF under ADF1		
	1- Call registerFileEvent() method with		
	parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE baFileList="03 3F007FFF11116F03		
	3F007FFF11116F09 3F007FFF11116F0C"		
	baADFAid="AID ADF1"	2- Applet is triggered	
	2- Update binary on ADF1\DF $_{\text{TEST}}$ \EF $_{\text{TARU}}$	_ r.pp.ot.io in.ggo.ou	
	3- Increase on ADF1\DF $_{\text{TEST}}$ \EF $_{\text{CARU}}$	3- Applet is triggered	
	4- Update record on ADF1\DF $_{\text{TEST}}$ \EF $_{\text{LARU}}$	4- Applet is triggered	
	5- Call ADF1View=getTheFileView()		
	6- Applet selects $\mathrm{EF}_{\mathrm{TARU}}$.		
	7- Call deregisterFileEvent() method with		
	<pre>parameters: event= EVENT_EXTERNAL_FILE_UPDATE aFileView = ADF1View</pre>	7- No exception is thrown	
	0 Undata himawa an ADE1\DE \EE		
	8- Update binary on ADF1\DF _{TEST} \EF _{TARU}	8- Applet is not triggered	
	9- Applet selects EF _{CARU} .		
	10- Call deregisterFileEvent() method with parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE aFileView = ADF1View	10- No exception is thrown	
	11- Increase on ADF1\DF $_{\text{TEST}}$ \EF $_{\text{CARU}}$		
	12- Applet selects $\mathrm{EF}_{\mathrm{LARU}}$.		
	13- Call deregisterFileEvent() method with	11- Applet is not triggered	
	parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE aFileView = ADF1View		
	14- Update record on ADF1\DF $_{\rm TEST}$ \EF $_{\rm LARU}$	13- No exception is thrown	
		14- Applet is not triggered	

ld	Description	API Expectation	APDU Expectation
5	Deregister DF does not affect child EF (under	,	- P
	ADF1)		
	,		
	1- Call registerFileEvent() method with		
	<pre>parameters: event= EVENT_EXTERNAL_FILE_UPDATE</pre>		
	baFileList="02 3F007FFF11116F03		
	3F007FFF1111"		
	baADFAid="AID ADF1"	2- Applet is triggered	
	2- Update binary on ADF1\DF _{TEST} \EF _{TARU}		
	Thou into		
	3- Applet selects DF_{TEST} .	4- No exception is thrown	
	4- Call deregisterFileEvent() method with	14- No exception is tillown	
	parameters:		
	event= EVENT_EXTERNAL_FILE_UPDATE		
	aFileView = ADF1View		
	5- Update binary on ADF1\DF _{TEST} \EF _{TARU}	5- Applet is triggered	
6	Deregister EF does not affect parent DF (under		
	ADF1)		
	<pre>1- Call registerFileEvent() method with parameters:</pre>	1- No exception is thrown	
	event= EVENT EXTERNAL FILE UPDATE		
	aFileView = ADF1View		
	O The date a leasure are ADE1\DE \DE	2- Applet is triggered	
	2- Update binary on ADF1\DF _{TEST} \EF _{TARU}	2- Applet is triggered	
	3- Applet selects $\mathrm{EF}_{\mathrm{TARU}}$.		
		4- No exception is thrown	
	4- Call deregisterFileEvent() method with parameters:		
	event= EVENT EXTERNAL FILE UPDATE		
	aFileView = ADF1View		
	5- Update binary on ADF1\DF _{TEST} \EF _{TARU}	5- Applet is triggered	
	6- Update record on ADF1\DF _{TEST} \EF _{LARU}	6- Applet is triggered	
	Thosa in the control of the control	, repliet is triggered	
	7- Restore EFs		
7	NullPointerException Exception		
	Call registerFileEvent() method with null	Shall throw a NullPointerException	
	aFileView		
8	EVENT_MENU_SELECTION not allowed	Shall throw a ToolkitException with	
	Call registerFileEvent() method with	EVENT_NOT_ALLOWED reason	
	event=EVENT_MENU_SELECTION	code	
9	EVENT_MENU_SELECTION_HELP_REQUEST		
	not allowed	Shall throw a ToolkitException with	
	Coll registerFileFront () mathed with	EVENT_NOT_ALLOWED reason	
	Call registerFileEvent() method with event= EVENT_MENU_SELECTION_HELP_REQUEST	code	
10	EVENT_TIMER_EXPIRATION not allowed	Shall throw a ToolkitException with	
		EVENT_NOT_ALLOWED reason	
	Call registerFileEvent() method with	code	
11	event=EVENT_TIMER_EXPIRATION EVENT_STATUS_COMMAND not allowed		
' '	27EN1_01A100_00MMAND Not allowed	Shall throw a ToolkitException with	
	Call registerFileEvent() method with	EVENT_NOT_ALLOWED reason	
	event=EVENT_STATUS_COMMAND	code	
12	EVENT_NOT_SUPPORTED Exception	Shall throw a ToolkitException with	
	Call registerFileEvent() method with	EVENT_NOT_SUPPORTED	
	event=EVENT_PROFILE_DOWNLOAD	reason code	

5.2.8.19 Method setMenuEntryTextAttribute

Test Area Reference: Api_2_Tkr_Smta.

5.2.8.19.1 Conformance requirement

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

5.2.8.19.1.1 Normal execution

- CRRN1: Sets the text attribute of a menu entry.
- CRRN2: The text attribute provided will be added to the text attribute list of the item text attribute list Comprehension TLV.
- CRRN3: After the invocation of this method, during the current card session, the CAT Runtime Environment shall dynamically update the menu stored in the terminal.

5.2.8.19.1.2 Parameter errors

- CRRP1: Shall throw a java.lang.NullPointerException if textAttribute is null.
- CRRP2: Shall throw a java.lang.ArrayIndexOutOfBoundsException if offset or length or both would cause access outside array bounds.
- CRRP3: Shall throw a ToolkitException with MENU_ENTRY_NOT_FOUND reason if the menu entry does not exist for this applet.
- CRRP4: Shall throw a ToolkitException with BAD_INPUT_PARAMETER reason if the length is different from 4.
- CRRP5: Shall throw a javacard.framework.TransactionException if the operation would cause the commit capacity to be exceeded.

5.2.8.19.1.3 Context errors

No requirements.

5.2.8.19.2 Test area files

Test Source: Test_Api_2_Tkr_Smta.java.

Test Applet: Api_2_Tkr_Smta _1.java.

Cap File: api_2_tkr_smta.cap.

5.2.8.19.3 Test coverage

CRR number	Test case number
N1	1, 2
N2	1, 2
N3	1, 2
P1	3
P2	4, 5, 6, 7
P3	8
P4	9
P5	Not testable

5.2.8.19.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Text attribute update 1		
	Call setMenuEntryTextAttribute() with parameters: Id = '02' textAttribute= "00 0C 11 02 00 0C 10 03" Offset = 0 Length = 4	No exception shall be thrown.	The UICC shall issue a SETUP MENU proactive command which contains the text Attribute list value "00 00 03 90" "00 0C 11 02" "00 00 03 90" "00 00 03 90"
2	Text attribute update 2		
	Call setMenuEntryTextAttribute() with parameters: Id = '04' textAttribute= "00 0C 11 02 00 0C 10 03" Offset = 4 Length = 4	No exception shall be thrown.	The UICC shall issue a SETUP MENU proactive command which contains the text Attribute list value "00 00 03 90" "00 0C 11 02" "00 00 03 90" "00 0C 10 03"
3	Call setMenuEntryTextAttribute() with null textAttribute	Shall throw a NullPointerException	
4	DstOffset >= dstBuffer.length	Shall throw a	
	<pre>setMenuEntryTextAttribute() dstBuffer.length = 8 dstOffset = 8 dstLength = 4</pre>	ArrayIndexOutOfBoundsException	
5	dstOffset < 0	Shall throw a	
	<pre>setMenuEntryTextAttribute() dstBuffer.length = 8 dstOffset = -1 dstLength = 4</pre>	ArrayIndexOutOfBoundsException	
6	DstLength > dstBuffer.length	Shall throw a	
	<pre>setMenuEntryTextAttribute() dstBuffer.length = 3 dstOffset = 0 dstLength = 4</pre>	ArrayIndexOutOfBoundsException	
7	dstOffset + dstLength > dstBuffer.length	Shall throw a	
	<pre>setMenuEntryTextAttribute() dstBuffer.length = 8 dstOffset = 5 dstLength = 4</pre>	ArrayIndexOutOfBoundsException	
8	<pre>MENU_ENTRY_NOT_FOUND exception Call setMenuEntryTextAttribute() with Id = 08</pre>	Shall throw a ToolkitException with MENU_ENTRY_NOT_FOUND reason code	

ld	Description	API Expectation	APDU Expectation
9	BAD_INPUT_PARAMETER exception		
	<pre>Call setMenuEntryTextAttribute() with length = 2</pre>	Shall throw a ToolkitException with BAD_INPUT_PARAMETER reason code	

5.2.9 Interface ViewHandler

Tests are done in inheriting interfaces EnvelopeHandler, EnvelopeResponseHandler, ProactiveHandler and ProactiveResponseHandler.

5.2.10 Interface BERTLVEditHandler

5.2.10.1 Method setTag

Test Area Reference: Api_2_Bte_Sttg.

5.2.10.1.1 Conformance requirement

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

public void setTag(byte bBERTag)

5.2.10.1.1.1 Normal execution

• CRRN1: Sets the tag of the BER TLV list.

5.2.10.1.1.2 Parameter errors

No requirements.

5.2.10.1.1.3 Context errors

No requirements.

5.2.10.1.2 Test area files

Test Source: Test_Api_2_Bte_Sttg.java.

Test Applet: Api_2_Bte_Sttg_1.java.

Cap File: api_2_bte_sttg.cap.

5.2.10.1.3 Test coverage

CRR number	Test case number
1	1

5.2.10.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type BER_EDIT_HANDLER		
	and capacity 0x10		
1			
	1- setTag(0x01)		
	2- getTag()	2- Returns 0x01	

5.2.10.2 Method getTag

Test Area Reference: Api_2_Bte_Gttg.

5.2.10.2.1 Conformance requirement

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

public byte getTag()

5.2.10.2.1.1 Normal execution

• CRRN1: Returns the BER Tag of the BER TLV list.

5.2.10.2.1.2 Parameter errors

No requirements.

5.2.10.2.1.3 Context errors

No requirements.

5.2.10.2.2 Test area files

Test Source: Test_Api_2_Bte_Gttg.java.

Test Applet: Api_2_Bte_Gttg_1.java.

Cap File: api_2_bte_gttg.cap.

5.2.10.2.3 Test coverage

CRR number	Test case number
1	Tested in API 2 BTE STTG

5.2.10.3 Method getSize

Test Area Reference: Api_2_Bte_Gtsz.

5.2.10.3.1 Conformance requirement

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

public short getSize()

5.2.10.3.1.1 Normal execution

• CRRN1: Returns the BER TLV size, this includes the tag and the length.

5.2.10.3.1.2 Parameter errors

No requirements.

5.2.10.3.1.3 Context errors

No requirements.

5.2.10.3.2 Test area files

Test Source: Test_Api_2_Bte_Gtsz.java.

Test Applet: Api_2_Bte_Gtsz_1.java.

Cap File: api_2_bte_gtsz.cap.

5.2.10.3.3 Test coverage

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

5.2.10.3.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using buildTLVHandler() with type BER_EDIT_HANDLER and capacity 0x110		
1	Fill the handler with BERTLV tag 0x01, data length 0x22 Call getSize() method	Returns 0x24	
2	Fill the handler with BERTLV tag 0x01, data length 0x7F Call getSize() method	Returns 0x81	
3	Fill the handler with BERTLV tag 0x01, data length 0x80 Call getSize() method	Returns 0x83	
4	Fill the handler with BERTLV tag 0x01, data length 0xFF Call getSize() method	Returns 0x102	
5	Fill the handler with BERTLV tag 0x01, data length 0x100 Call getSize() method	Returns 0x104	
6	Fill the handler with BERTLV tag 0x01, data length 0x110 Call getSize() method	Returns 0x114	

5.2.10.4 Method getLength

Test Area Reference Api_2_Bte_Glen.

5.2.10.4.1 Conformance requirement

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

5.2.10.4.1.1 Normal execution

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

5.2.10.4.1.2 Parameter errors

No requirements.

5.2.10.4.1.3 Context errors

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

5.2.10.4.2 Test area files

Test Source: Test_Api_2_Bte_Glen.java.

Test Applet: Api_2_Bte_Glen_1.java.

Cap File: api_2_bte_glen.cap.

5.2.10.4.3 Test coverage

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

5.2.10.4.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and set its BER Tag to 0x01		
1	Clear the handler	Deput of get ength() is 0	
I	getLength()	Result of getLength() is 0	
	gechengen ()		
2	Call the appendArray() method with buffer	Result of getLength() is 9	
_	length 9	Treadit of gatzongth() to a	
	10.19 0		
	getLength()		
3	Call the appendArray() method, with buffer	Result of getLength() is 253	
	length = 253		
	getLength()		
4	Build a 7Fh Handler and fill it with	Result of getLength() is 7Fh	
	appendArray() method		
	getLength()		
	Build a 80h Handler and fill it with	Decrit of wetterneth() is 00h	
5		Result of getLength() is 80h	
	appendArray() method qetLength()		
	gechengen ()		
6	Build a 100h Handler and fill it with	Result of getLength() is 100h	
ľ	appendArray() method	rtoodit of gotzongth() to room	
	getLength()		

5.2.10.5 Method copy

Test Area Reference Api_2_Bte_Copy.

5.2.10.5.1 Conformance requirement

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

5.2.10.5.1.1 Normal execution

- CRRN1: copies the Comprehension TLV list contained in the handler to the destination byte array.
- CRRN2: returns dstOffset + dstLength.

5.2.10.5.1.2 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 Comprehension TLV List, an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException.OUT_OF_TLV_BOUNDARIES.

5.2.10.5.1.3 Context errors

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

5.2.10.5.2 Test area files

Test Source: Test_Api_2_Bte_Copy.java.

Test Applet: Api_2_Bte_Copy _1.java.

Cap File: api_2_bte_copy.cap.

5.2.10.5.3 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 BERTLVEdit
	Handler

5.2.10.5.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	NULL as parameter to dstBuffer	NullPointerException is thrown	
2	Call the appendArray() method with 81 03 01 41 42 82 02 81 43		
	DstOffset > dstBuffer.length	ArrayIndexOutOfBoundsException is thrown	
	copy()		
	dstBuffer.length = 5		
	dstOffset = 6		
	dstLength = 0		
3	dstOffset < 0	ArrayIndexOutOfBoundsException is thrown	
	copy()		
	dstBuffer.length = 5		
	dstOffset = -1		
	dstLength = 1		

ld	Description	API Expectation	APDU Expectation
4	DstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
		n is thrown	
	copy()		
	<pre>dstBuffer.length = 5 dstOffset = 0</pre>		
	dstLength = 6		
5	dstOffset + dstLength > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
3	copy()	n is thrown	
	dstBuffer.length = 5	II is tillowii	
	dstOffset = 3		
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	copy()	n is thrown	
	dstBuffer.length = 5		
	<pre>dstOffset = 0 dstLength = -1</pre>		
7	dstLength > length of the Comprehension TLV	ToolkitException.OUT_OF_TLV_	
'	list	BOUNDARIES is thrown	
	copy()	BOONDAKIES IS UIIOWII	
	dstBuffer.length = 10		
	dstOffset = 0		
	dstLength = 10		
8	Successful call, dstBuffer is the whole buffer	Result of copy() is 9	
	copy()		
	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	
10	copy()	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	
	copy()		
	dstBuffer.length = 15		
	dstOffset = 3		
12	dstLength = 6 Compare the whole buffer	Popult of array(Compare() is 0	
13	Compare the whole buller	Result of arrayCompare() is 0	

5.2.10.6 Method findTLV

Test Area Reference Api_2_Bte_Find.

5.2.10.6.1 Conformance requirement

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

5.2.10.6.1.1 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.

5.2.10.6.1.2 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.

5.2.10.6.1.3 Context errors

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

5.2.10.6.2 Test area files

Test Source: Test_Api_2_Bte_Find.java.

Test Applet: Api_2_Bte_Find_1.java.

Cap File: api_2_bte_find.cap.

5.2.10.6.3 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 BERTLVEdit Handler

5.2.10.6.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	Initialize the handler with		
	81 03 01 21 00 82 02 81 82		
	Invalid input parameter	ToolkitException.BAD_INPUT_PA	
	findTLV()	RAMETER is thrown	
	Occurrence = 0		
2	Call the init() method		
	Search 1st TLV	Result is TLV_FOUND_CR_SET	
	findTLV()		
	Tag = 01h		
	Occurrence = 1		
3	Call the getValueLength() method	Result is 03h	
4	Search 2nd TLV	Result is TLV_FOUND_CR_SET	
	findTLV()		
	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	
	findTLV()		
	Tag = 03h		
	Occurrence = 1		
7	Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown.	

ld	Description	API Expectation	APDU Expectation
8	Search a tag with wrong occurrence	Result is TLV_NOT_FOUND	
	findTLV()		
	Tag = 01h		
ļ	Occurrence = 2		
9	Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown.	
10	Append a TLV with tag=02h		
	Search the TLV	Result is	
	findTLV()	TLV_FOUND_CR_NOT_SET	
	Tag = 02h		
	Occurrence = 2		
11	Append a TLV with tag=04h		
	Search the TLV	Result is	
	findTLV()	TLV_FOUND_CR_NOT_SET	
	Tag = 04h		
ļ	Occurrence = 1		
12	Search tag 81h	Result is TLV_FOUND_CR_SET	
	findTLV()		
	Tag = 81h		
ļ	Occurrence = 1		
13	Search tag 84h	Result is	
	findTLV()	TLV_FOUND_CR_NOT_SET	
	Tag = 84h		
	Occurrence = 1		

5.2.10.7 Method getValueLength

Test Area Reference Api_2_Bte_Gvle.

5.2.10.7.1 Conformance requirement

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

5.2.10.7.1.1 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.

5.2.10.7.1.2 Parameter errors

No requirements.

5.2.10.7.1.3 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.

5.2.10.7.2 Test area files

Test Source: Test_Api_2_Bte_Gvle.java.

Test Applet: Api_2_Bte_Gvle_1.java.

Cap File: api_2_bte_gvle.cap.

5.2.10.7.3 Test coverage

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

5.2.10.7.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	Initialize the handler with		
	81 03 01 21 00 82 02 81 82		
	getValueLength()	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown	
2	Call the appendTLV() method		
	tag = 0D		
	valueOffset = 0		
	valueLength = 0		
	Search TLV 0Dh (Text String TLV)		
	getValueLength()	Result is 00h	
3	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 02 04 00		
	length = 1 (+ dcs byte)		
	Search TLV 0Dh (Text String TLV)		
	getValueLength()	Result is 02h	
4	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 7F 04 00 00		
	Search TLV 0Dh (Text String TLV)		
	getValueLength()	Result is 7Fh	
5	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 81 80 04 00 00		
	Search TLV 0Dh (Text String TLV)		
	getValueLength()	Result is 80h	
	J		
6	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 81 F1 04 00 00		
	3. 52 52 5 5. 55 55		
	Search TLV 0Dh (Text String TLV)		
	getValueLength()	Result is F1h	
	J()	Troodicio i iii	

5.2.10.8 Method getValueByte

 $Test\ Area\ Reference\ Api_2_Bte_Gvby.$

5.2.10.8.1 Conformance requirement

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

5.2.10.8.1.1 Normal execution

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

5.2.10.8.1.2 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.

5.2.10.8.1.3 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.

5.2.10.8.2 Test area files

Test Source: Test_Api_2_Bte_Gvby.java.

Test Applet: Api_2_Bte_Gvby_1.java.

Cap File: api_2_bte_gvby.cap.

5.2.10.8.3 Test coverage

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

5.2.10.8.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
ļ	set its BER Tag to 0x01		
1	Initialize the handler with		
	81 03 01 FF FE 82 02 81 FD		
	type = FFh		
	qualifier = FEh		
	destination = FDh		
	getValueByte(0)	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 FEh (qualifier)	
		,	
4	Search TLV 02h (Device Identities TLV)		
	getValueByte(0)	Result is 81h (Source)	
		,	
5	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 7F 04 00 01 7D		
	Search TLV 0Dh (Text String TLV)		
	getValueByte(7E)	Result is 7Dh	
6	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 81 80 04 00 01 7E		
	Search TLV ODh (Text String TLV)		
	getValueByte(7E)	Result is 7Dh	

ld	Description	API Expectation	APDU Expectation
7	getValueByte(7F)	Result is 7Eh	
8	Initialize the handler with 81 03 01 21 00 82 02	Result is EFh	
	81 02 0D 81 F1 04 00 01 EF		
	Search TLV 0Dh (Text String TLV) getValueByte(F0)		

5.2.10.9 Method copyValue

Test Area Reference Api_2_Bte_Cpyv.

5.2.10.9.1 Conformance requirement

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

5.2.10.9.1.1 Normal execution

- CRRN1: copies a part of the last TLV element which has been found, into a destination. buffer.
- CRRN2: returns dstOffset + dstLength.

5.2.10.9.1.2 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 is negative or valueOffset + dstLength > current TLV length, an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException.OUT_OF_TLV_BOUNDARIES.

5.2.10.9.1.3 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.

5.2.10.9.2 Test area files

Test Source: Test_Api_2_Bte_Cpyv.java.

Test Applet: Api_2_Bte_Cpyv_1.java.

Cap File: api_2_bte_cpyv.cap.

5.2.10.9.3 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 BERTLVEdit Handler
C2	11

5.2.10.9.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		-
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	Initialize the handler with		
	81 03 01 21 00 82 02 81 82		
	Select a TLV		
	copyValue() with a null dstBuffer	NullPointerException is thrown	
<u> </u>			
2	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 10 04 00 01 0E		
	Select Text String TLV	A was the day Out Of Day and a Five anti-	
	dstOffset > dstBuffer.length copyValue()	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 6		
	dstLength = 0		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	copyValue()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = -1		
L_	dstLength = 1	Amendada QuitofDavada E.	
4	dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>copyValue() dstBuffer.length = 5</pre>	n is thrown	
	dstOffset = 0		
	dstLength = 6		
5	dstOffset + dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	copyValue()	n is thrown	
	dstBuffer.length = 5		
	dstOffset = 3		
6	dstLength = 3 dstLength < 0	ArrayIndoxOutOfPoundaEvacatio	
O	copyValue()	ArrayIndexOutOfBoundsExceptio n is thrown	
	dstBuffer.length = 5	II IS UIIOWII	
	dstOffset = 0		
	dstLength = -1		
7	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 06 04 00 01 04		
	Select Text String TLV		
	valueOffset > Text String Length	ToolkitException.OUT_OF_TLV_	
	<pre>copyValue() valueOffset = 7</pre>	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 0		
8	[Select Text String TLV]	ToolkitException.OUT_OF_TLV_	
	valueOffset < 0	BOUNDARIES is thrown	
	copyValue()		
	valueOffset = -1		
	dstBuffer.length = 15		
	<pre>dstOffset = 0 dstLength = 1</pre>		
	dechenden = 1		

ld	Description	API Expectation	APDU Expectation
9	[Select Text String TLV]	ToolkitException.OUT_OF_TLV_	-
	dstLength > Text String length	BOUNDARIES is thrown	
	copyValue()		
	<pre>valueOffset = 0</pre>		
	dstBuffer.length = 15		
	dstOffset = 0		
40	dstLength = 7	Tablist Conntinuo OUT OF TIV	
10	[Select Text String TLV] valueOffset + dstLength > Text String	ToolkitException.OUT_OF_TLV_	
	length	BOUNDARIES is thrown	
	copyValue()		
	valueOffset = 2		
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 5		
11	Initialize the handler with		
	81 03 01 21 00 82 02 81 82		
	copyValue()	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown	
12	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 11 04 00 01 0F		
	Select Text String TLV		
	Successful call	Result of copyValue() is 17	
	copyValue()		
	valueOffset = 0		
	dstBuffer.length = 17		
	<pre>dstOffset = 0 dstLength = 17</pre>		
13	Compare buffer	Result is 00h	
13	buffer = 04 00 01 0F	Result is oon	
	Darrer - 04 00 01 01		
14	Initialize dstBuffer		
' '	dstBuffer = 55 55 55		
	Successful call	Result of copyValue() is 15	
	copyValue()		
	valueOffset = 2		
	dstBuffer.length = 20		
	dstOffset = 3		
L	dstLength = 12		
15	Compare buffer	Result is 00h	
	buffer =		
	55 55 55 01 02		
	03 04 05 06 07 08 09 0A 0B 0C		
	155 55 55 55 55		
	100 00 00 00		

5.2.10.10 Method compareValue

Test Area Reference Api_2_Bte_Cprv.

5.2.10.10.1 Conformance requirement

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

5.2.10.10.1.1 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 Comprehension TLV List is less than that in compareBuffer.
- CRRN3: returns 1 if the first miscomparing byte in Comprehension TLV List is greater than that in compareBuffer.

5.2.10.10.1.2 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 is negative or valueOffset + dstLength > current TLV length, an instance of ToolkitException shall be thrown. The reason code shall be ToolkitException.OUT_OF_TLV_BOUNDARIES.

5.2.10.10.1.3 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.

5.2.10.10.2 Test area files

Test Source: Test_Api_2_Bte_Cprv.java.

Test Applet: Api_2_Bte_Cprv_1.java.

Cap File: api_2_bte_cprv.cap.

5.2.10.10.3 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 BERTLVEdit Handler
C2	11

5.2.10.10.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	Initialize the handler with		
	81 03 01 21 00 82 02 81 02		
	Select a TLV		
	compareValue() with a null compareBuffer	NullPointerException is thrown	
		·	

Initialize the handler with 81 03 01 21 00 82 02 8 10 20 00 04 00 01 0E select Text String TLV	ld	Description	API Expectation	APDU Expectation
Select Text String TIV CompareOffset > com			7 ii i Expositation	7.1. 2.0 Expositation
CompareOffset > compareBuffer.length compareValue() valueOffset > Text String TLV valueOffset > Text String TLV compareValue() valueOffset > 0 c				
compareValue()		Select Text String TLV		
compareValue()		compareOffset > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
compareOffset = 6 compareValue() compareBuffer.length = 5 compareDeffset = -1 4				
CompareLength = 0				
CompareValue ()				
compareValue() compareDestIfer.length = 5 compareLength = 1 compareLength = 1 compareLength = 5 compareDestIfer.length compareValue() compareDestIfer.length = 5 compareDestIfer.length = 6 compareDestIfer.length compareDestIfer.length compareDestIfer.length compareDestIfer.length compareDestIfer.length compareDestIfer.length compareDestIfer.length compareDestIfer.length = 5 compareDestIfer.length compareDestIfer.length compareDestIfer.length compareDestIfer.length compareDestIfer.length = 5 compareDestIfer.length compareDestIfer.length = 5 compareDestIfer.length c	2		ArrayIndoxOutOfRoundsExcentio	
compareDuffer: length = 5 compareDemoth = 1 4	3		I	
compareLength = 1 4		·	II IS UIIOWII	
CompareValue()				
compareBuffer length = 5 compareDiffset + compareLength				
compareBuffer.length = 5 compareLength = 6 compareLength = 6 compareValue() compareValue() compareOffset + compareLength compareOffset = 3 compareOffset = 3 compareOffset = 5 compareOffset = 0 compareOffset = 0 compareOffset = 0 compareOffset = 0 compareOffset = 0 compareOffset = 0 compareOffset = 0 compareUnite() compareOffset = 0 compareUnite() compareUnite() valueOffset > Text String Length compareValue() valueOffset > Text String TLV compareOffset > 0 com	4			
compareOffset + compareLength			n is thrown	
compareLength = 6 compareOffset + compareLength				
CompareOffset + compareLength				
compareValue() compareBuffer.length compareValue() compareDuffer.length 5 compareDuffer.length 5 compareDuffer.length 5 compareOffset 0 compareDuffer.length 5 compareDuffer.length 5 compareDuffer.length 5 compareDuffer.length 5 compareDuffer.length 5 compareDuffer.length 6 compareValue() compareValue() compareValue() compareDuffer.length 15 compareDuffer.length	5		ArravIndexOutOfBoundsExceptio	
compareValue() compareDuffer.length = 5 compareDuffer.length < 0 compareBuffer.length < 0 compareBuffer.length = 5 compareDuffer.length = 5 compareDuffer.length = 5 compareDuffer.length = 1 7 Initialize the handler with 81 03 01 21 00 82 02 81 02 0D 06 04 00 01 04 Select Text String TLV valueOffset > Text String Length compareValue() valueOffset = 0 compareDuffer.length = 15 compareOuffer.length = 15 compareDuffer.length = 15 compareOuffer.length = 15 compareDuffer.length = 1	-			
compareOffset = 3' compareLength = 3 6		compareValue()		
compareLength = 3 6				
6 compareValue() compareLength < 0 compareBuffer.length = 5 compareOffset = 0 compareDeffset = 0 compareLength = 1 7 Initialize the handler with 81 03 01 21 00 82 02 81 02 0D 66 04 00 01 04 Select Text String TLV valueOffset > Text String Length compareValue() valueOffset = 0 compareDeffset				
compareBuffer, length = 5 compareBuffer, length = 5 compareBuffer, length = 1 7 Initialize the handler with 81 03 01 21 00 82 02 81 102 0D 06 04 00 01 04 Select Text String TLV valueOffset > Text String Length compareDuffer, length = 15 compareDuffer, length = 15 compareDuffer = 0 compareDuffer = 0 compareDuffer = 0 compareDuffer, length = 15 compareOffset = 0 compareDuffer, length = 15 compareOffset = 0 compareDuffer, length = 15 compareOffset = 0 compareDuffer, length = 15 compareOffset = 0 compareDuffer, length = 15 compareOffset = 0 compareDuffer, length = 15 compareOffset = 0 compareDuffer, length = 15 compareOffset = 0 compareDuffer, length = 15 compareOffset = 0 compareDuffer, length = 15 compareOffset = 0 compareDuffer, length = 15 compareOffset = 0 compareDuffer, length = 15 compareOffset = 0 compareDuffer = 1 to initialize the handler with t			A many day day Out Of Day and day Co	
compareBuffer.length = 5 compareOffset = 0 compareLength = -1 7	Ь			
compareOffset = 0 compareLength = -1 7			n is thrown	
compareLength = -1 7 Initialize the handler with 81 03 01 21 00 82 02 81 02 0D 06 04 00 01 04 Select Text String TLV valueOffset > Text String Length compareValue() valueoffset = 0 compareBuffer.length = 15 compareValue() valueoffset = 0 compareValue() valueoffset = 0 compareInfer.length = 15 compareOffset = 0 compareInfer.length = 15 compareOffset = 0 compareInfer.length = 15 compareOffset = 0 compareInfer.length = 15 compareInfer.length = 15 compareInfer.length = 15 compareInfer.length = 15 compareInfer.length = 15 compareOffset = 0 compareInfer.length = 15 compareOffset = 0 compareInfer.length = 15 compareOffset = 0 compareInfer.length = 15 compareOffset = 0 compareInfer.length = 15 compareOffset = 0 compareInfer.length > Text String length compareValue() valueOffset + compareLength > Text String length compareValue() valueOffset = 2 compareBuffer.length = 15 compareOffset = 0 compareInfer.length = 15 compareInfer.length = 15 compareInfer.length = 15 compareOffset = 0 compareInfer.length = 15 compareOffset = 0 com				
Initialize the handler with 81 03 01 21 00 82 02 81 02 0D 06 04 00 01 04				
Select Text String TLV	7			
Select Text String TLV valueOffset > Text String Length compareValue() valueOffset = 7 compareBuffer.length = 15 compareOffset = 0 compareOffset = 0 compareValue() valueOffset < 0 compareValue() valueOffset = -1 compareDeffer.length = 15 compareDeffer = 0 compar	'			
valueOffset > Text String Length compareValue() valueOffset = 7 compareBuffer.length = 15 compareDeffset = 0 compareDeffset = 0 compareDeffset = 0 valueOffset < 0 valueOffset < 0 valueOffset < 0 compareDeffset < 0 compareDeffset < 0 valueOffset < 0 compareDeffset < 0 compa				
CompareValue() valueOffset = 7 CompareOffset = 0 CompareOffs			ToolkitException.OUT OF TLV	
compareBuffer.length = 15 compareOffset = 0 compareIngth = 0 8				
compareOffset = 0 compareLength = 0 8				
CompareLength = 0				
Select Text String TLV valueOffset < 0 compareValue() valueOffset = -1 compareBuffer.length = 15 compareDength > Text String TLV compareDuffer.length = 15 compareValue() valueOffset = 0 compareValue() valueOffset = 0 compareDuffer.length = 15 compareOffset = 0 compareDuffer.length = 15 compareOffset = 0 compareDuffer.length = 7 Select Text String TLV compareOffset = 0 compareOffset = 0 compareOffset = 0 compareDuffer.length > Text String Duffset = 0 compareDuffset = 0 compareOffset = 0		_		
valueOffset < 0 compareValue() valueOffset = -1 compareDuffer.length = 15 compareOffset = 0 compareLength > Text String TLV] compareValue() valueOffset = 0 compareValue() valueOffset = 0 compareDuffer.length = 15 compareOffset = 0 compareDuffset = 0 compareValue() valueOffset + compareLength > Text String length compareValue() valueOffset = 2 compareDuffset = 0 compareDuf	8		ToolkitException OUT OF TLV	
compareValue() valueOffset = -1 compareBuffer.length = 15 compareOffset = 0 compareLength > Text String TLV] compareValue() valueOffset = 0 compareValue() valueOffset = 0 compareOffset = 0 compareValue() valueOffset + compareOffset > Text String TLV] valueOffset + compareOffset > Text String Indicate Indicat				
<pre>compareBuffer.length = 15 compareOffset = 0 compareLength = 1 9</pre>		compareValue()		
compareOffset = 0 compareLength = 1 9				
CompareLength = 1				
Select Text String TLV compareLength > Text String length compareValue() valueOffset = 0 compareDeffer length = 15 compareLength = 7 10		_		
compareLength > Text String length compareValue() valueOffset = 0 compareOffset = 0 compareLength = 7 10	a		ToolkitException OUT OF TIV	
<pre>compareValue() valueOffset = 0 compareDiffer.length = 15 compareOffset = 0 compareLength = 7 10</pre>				
compareBuffer.length = 15 compareOffset = 0 compareLength = 7 10			20011D/ II II 20 IO II II OWII	
compareOffset = 0 compareLength = 7 10				
compareLength = 7 10				
10 [Select Text String TLV] valueOffset + compareLength > Text String length compareValue() valueOffset = 2 compareBuffer.length = 15 compareOffset = 0 compareLength = 5 11 Initialize the handler with 81 03 01 21 00 82 02 81 82 compareValue() ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown				
<pre>valueOffset + compareLength > Text String length compareValue() valueOffset = 2 compareBuffer.length = 15 compareOffset = 0 compareLength = 5</pre> Initialize the handler with 81 03 01 21 00 82 02 81 82 compareValue() ToolkitException.UNAVAILABLE_	10		ToolkitEvention OUT OF TIV	
length compareValue() valueOffset = 2 compareBuffer.length = 15 compareOffset = 0 compareLength = 5 11	10			
compareValue() valueOffset = 2 compareBuffer.length = 15 compareOffset = 0 compareLength = 5 Initialize the handler with 81 03 01 21 00 82 02 81 82 compareValue() ToolkitException.UNAVAILABLE_			DOGRAD/ INTEG IS UNIOWIT	
compareBuffer.length = 15 compareOffset = 0 compareLength = 5 Initialize the handler with 81 03 01 21 00 82 02 81 82 compareValue() ToolkitException.UNAVAILABLE_		compareValue()		
compareOffset = 0 compareLength = 5 11 Initialize the handler with 81 03 01 21 00 82 02 81 82 compareValue() ToolkitException.UNAVAILABLE_				
compareLength = 5 11				
11		_		
81 03 01 21 00 82 02 81 82 compareValue() ToolkitException.UNAVAILABLE_		Comparenengen - 5		
81 03 01 21 00 82 02 81 82 compareValue() ToolkitException.UNAVAILABLE_	11	Initialize the handler with		
compareValue() ToolkitException.UNAVAILABLE_	' '			
			ToolkitException.UNAVAILABLE	
		,	ELEMENT is thrown	

Initialize the handler with \$1 03 01 21 00 82 02	ld	Description	API Expectation	APDU Expectation
Select Text String TAV	12	Initialize the handler with 81 03 01 21 00 82 02	-	-
Initialize compareBuffer 04 to 0.01 of				
CompareNatifer = 0				
O4 00 01 0F Compare buffers CompareValue() valueoffeet = 0 compareOffeet = 0 compareDuffer = 0 compareDuffer = 0 o4 00 01 02 03 o4 05 06 07 08 o5 03 08 02 00 oE 10				
Compare buffers Compare buffers Compare officer Compare of				
CompareValue() valueOffset = 0 compareIngther = 0 compareIngther = 0 compareIngther = 0 4 0 0 10 20 3 04 05 06 07 08 05 0A 08 0C 0D 0E 10 CompareBuffer compareBuffer 03 00 01 09 CompareBuffer 04 00 00 00 00 00 00 00 00 00 00 00 00			Result is 00h	
valueOffset = 0			result is oon	
Initialize compareBuffer 04 00 01 02 03				
Initialize compareBuffer				
CompareBuffer = 0.4 0.0 1.0 2.0 3		compareLength = 17		
CompareBuffer = 0.4 0.0 1.0 2.0 3	13	Initialize compareBuffer		
04 00 01 02 03 03 04 05 06 07 08 05 0A 08 0C 0D 0B 10	'			
05 0A 0B 0C 0D 0E 10 Compare buffers with same parameters Result is -1		l =		
Result is -1				
Compare buffers with same parameters				
14			Result is -1	
compare Buffer = 0		Compare buners with same parameters	Tresuit is - i	
03 00 01 0F Compare buffers with same parameters Result is +1	14			
Compare buffers with same parameters		<u> </u>		
Initialize compareBuffer				
CompareBuffer		Compare buffers with same parameters	Result is +1	
CompareBuffer	15	Initialize compareBuffer		
03 04 05 06 07				
08 09 0A 0B 0C 55 55 55 55 Compare buffers compareValue() valueOffset = 2 compareLength = 12 16 Initialize 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 Initialize compareBuffer compareBuffer = 55 55 55 05 02 01 03 04 05 06 07 08 09 0A 0B 0C 08 09 0A 0B 0C 08 09 0A 0B 0C 08 09 0A 0B 0C 08 09 0A 0B 0C 08 09 0A 0B 0C 08 09 0A 0B 0C 08 09 0A 0B 0C 08 09 0A 0B 0C 08 09 0A 0B 0C 08 09 0A 0B 0C 08 09 0A 0B 0C 08 09 0A 0B 0C 08 09 0A 0B 0C 08 09 0A 0B 0C 08 55 55 55 55 55 08 09 0A 0B 0C 08 55 55 55 55 55 08 08 08 08 08 08 08 08 08 08 08 08 08 08 08 55 55 55 55 08 08 08 08 08 08 55 55 55 55 08 08 08 08 08 08 55 55 55 55 08 08 08 08 08 08 55 55 55 55 08 08 08 08 08 08 08 08 08 08 55 55 55 55 08 08 08 08 08 08 08 08 08 08 55 55 55 55 08				
Compare buffers Compare buffers CompareValue() ValueOffset = 2 CompareOffset = 3 CompareLength = 12				
Compare buffers Result is 00h				
CompareValue() valueOffset = 2 compareOffset = 3 compareOffset = 3 compareDent = 12			Result is 00h	
CompareOffset = 3		l •		
CompareLength = 12				
Initialize compareBuffer				
CompareBuffer =		compareLength = 12		
CompareBuffer =	16	Initialize compareRuffer		
03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Result is -1 Initialize compareBuffer compareBuffer = 55 55 55 55 55 Compare buffers with same parameters Result is -1 Initialize compareBuffer Compare buffers with same parameters Result is +1 Initialize compareBuffer compareBuffer = 55 55 55 59 90 30 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55	.			
08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Result is -1 17		55 55 55 02 01		
Compare buffers with same parameters Result is -1				
Compare buffers with same parameters Result is -1				
Initialize compareBuffer			Posult is -1	
compareBuffer =		Compare buriers with same parameters	Result is -1	
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 18 Initialize compareBuffer compareBuffer = 55 55 55 99 03 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55	17			
03 04 05 06 07 08 09 0A 0A 0D 55 55 55 55 Compare buffers with same parameters Result is +1 18 Initialize compareBuffer compareBuffer = 55 55 55 99 03 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55		l =		
08 09 0A 0A 0D 55 55 55 55 Compare buffers with same parameters Result is +1 18 Initialize compareBuffer compareBuffer = 55 55 55 99 03 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55				
S5 55 55 55 Compare buffers with same parameters Result is +1				
Compare buffers with same parameters Result is +1				
18			Result is +1	
55 55 55 99 03 03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55	18	Initialize compareBuffer		
03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55				
08 09 0A 0B 0C 55 55 55 55				
55 55 55 55				
		Compare buffers with same parameters	Result is +1	

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

Test Area Reference Api_2_Bte_Facyb_Bs.

5.2.10.11.1 Conformance requirement

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

5.2.10.11.1.1 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.

5.2.10.11.1.2 Parameter errors

- CRRP1: if dstBuffer is null NullPointerException shall be thrown.
- CRRP2: if dstOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

5.2.10.11.1.3 Context errors

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

5.2.10.11.2 Test area files

Test Source: Test_Api_2_Bte_Facyb_Bs.java.

Test Applet: Api_2_Bte_Facyb_Bs_1.java.

Cap File: api_2_bte_facyb_bs.cap.

5.2.10.11.3 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 BERTLVEdit Handler

5.2.10.11.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type BER EDIT HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	Initialize the handler with 81 03 01 21 00 82 02 81 02		
	FindAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
2	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 10 04 00 01 0E		
	dstOffset > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	<pre>tag = 0Dh dstBuffer.length = 20 dstOffset = 21</pre>		
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	
	<pre>findAndCopyValue() dstBuffer.length = 20 dstOffset = -1</pre>	n is thrown	
4	length > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>findAndCopyValue() dstBuffer.length = 15 dstOffset = 0</pre>	n is thrown	
5	DstOffset + length >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	DstBuffer.length = 20 DstOffset = 5		
	bbcollisec = 3		
6	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 11 04 00 01 0F		
	Select a TLV (tag 02h)		
	findAndCopyValue()	ToolkitException.UNAVAILABLE_	
	tag = 03h	ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE_ ELEMENT is thrown.	
7	Initialize the handler with 81 03 01 21 00 82 02 81 02 0D 11 04 00 01 0F		
	0.02021.0100010.		
	Successful call	Result of findAndcopyValue() is	
	<pre>findAndCopyValue() Tag = 0Dh</pre>	17	
	DstBuffer.length = 17		
0	DstOffset = 0 Compare buffer	Deput in OOh	
8	buffer = 04 00 01 0F	Result is 00h	
9	Initialize dstBuffer		
-	dstBuffer = 55 55 55 Successful call	Result of findAndcopyValue() is	
	findAndCopyValue()	19	
	dstBuffer.length = 20		
10	dstOffset = 2 Compare buffer	Result is 00h	
10	buffer =	TOOUR IS COIT	
	55 55 04 00 01		
	02 03 04 05 06 07 08 09 0A 0B		
	OC OD OE OF 55		

ld	Description	API Expectation	APDU Expectation
11	Initialize the handler with 81 03 01 21 00 82 02 81 02 0D 11 04 00 01 0F		·
	append a 2nd Text String TLV		
	Successful call findAndCopyValue() tag = 0Dh dstBuffer.length = 17 dstOffset = 0	Result of findAndcopyValue() is 17	
12	Compare buffer	Result is 00h	
	buffer = 04 00 01 0F		
13	Initialize the handler with 81 03 01 21 00 82 02 81 02 0D 11 04 00 01 0F		
	Successful call (with tag 8Dh) findAndCopyValue() tag = 8Dh dstBuffer.length = 17 dstOffset = 0	Result of findAndcopyValue() is 17	
14	Compare buffer buffer = 04 00 01 0F	Result is 00h	
15	Append tag 0Fh buffer = 00 01 0F		
	Successful call (with tag 8Fh) findAndCopyValue() tag = 8Fh dstBuffer.length = 16 dstOffset = 0	Result of findAndcopyValue() is 16	
16	Compare buffer buffer = 00 01 0F	Result is 00h	

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

Test Area Reference Api_2_Bte_Facybbs_Bss.

5.2.10.12.1 Conformance requirement

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

5.2.10.12.1.1 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.

5.2.10.12.1.2 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 is negative or valueOffset + dstLength > current TLV length, 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.

5.2.10.12.1.3 Context errors

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

5.2.10.12.2 Test area files

Test Source: Test_Api_2_Bte_Facybbs_Bss.java.

Test Applet: Api_2_Bte_Facybbs_Bss_1.java.

Cap File: api_2_bte_facybbs_bss.cap.

5.2.10.12.3 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
P4	24
C1	Does not apply for BERTLVEdit Handler

5.2.10.12.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		•
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	Initialize the handler with		
	81 03 01 21 00 82 02 81 82		
	findAndCopyValue() with a null dstBuffer	NullPointerException is thrown	
		·	
2	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 10 04 00 01 0E		
	dstOffset > dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	tag = 0Dh, occurrence = 1		
	<pre>valueOffset = 0</pre>		
	dstBuffer.length = 5		
	dstOffset = 6		
	dstLength = 0		

ld	Description	API Expectation	APDU Expectation
3	dstOffset < 0	ArrayIndexOutOfBoundsExceptio	AI DO EXPECIATION
3	findAndCopyValue()	In is thrown	
	dstBuffer.length = 5		
	dstOffset = -1		
A	dstLength = 1	Arroy IndovO::tOfDo::rd-F:::	
4	dstLength >dstBuffer.length findAndCopyValue()	ArrayIndexOutOfBoundsExceptio	
	dstBuffer.length = 5	n is thrown	
	dstOffset = 0		
	dstLength = 6		
5	dstOffset + dstLength >dstBuffer.length	ArrayIndexOutOfBoundsExceptio	
	<pre>findAndCopyValue() dstBuffer.length = 5</pre>	n is thrown	
	dstOffset = 3		
	dstLength = 3		
6	dstLength < 0	ArrayIndexOutOfBoundsExceptio	
	findAndCopyValue()	n is thrown	
	<pre>dstBuffer.length = 5 dstOffset = 0</pre>		
	dstLength = -1		
	3.		
7	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 06 04 00 01 04		
	valueOffset > Text String Length	ToolkitException.OUT_OF_TLV_	
	<pre>findAndCopyValue() tag = 0Dh, occurrence = 1</pre>	BOUNDARIES is thrown	
	valueOffset = 7		
	dstBuffer.length = 15		
	dstOffset = 0		
	dstLength = 0	T #175 #1 0UT 05 TIV	
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	<pre>findAndCopyValue() valueOffset = -1</pre>	BOUNDARIES is thrown	
	dstBuffer.length = 15		
	dstOffset = 0		
9	dstLength = 1	Tablist Cycontian OUT OF TIV	
9	dstLength > Text String length findAndCopyValue()	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
	valueOffset = 0	BOONDAKIES IS UIIOWII	
	dstBuffer.length = 15		
	dstOffset = 0		
10	dstLength = 7 valueOffset + dstLength > Text String length	ToolkitException.OUT_OF_TLV_	
10	findAndCopyValue()	BOUNDARIES is thrown	
	valueOffset = 2	BOOTAD/ II (IEO IS II II OWI)	
	dstBuffer.length = 15		
	<pre>dstOffset = 0 dstLength = 5</pre>		
	apendiden - 2		
11	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 11 04 00 01 0F		
	Select a TLV (tag 02h)		
	findAndCopyValue()	ToolkitException.UNAVAILABLE_	
	<pre>findAndCopyValue() tag = 0Dh</pre>	ELEMENT is thrown	
	occurrence = 2		
	Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown.	
12	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 11 04 00 01 0F		
	Successful call	Result of findAndCopyValue() is	
	findAndCopyValue()	17	
	tag = 0Dh, occurrence = 1	''	
	valueOffset = 0		
	dstBuffer.length = 17		
	<pre>dstOffset = 0 dstLength = 17</pre>		
	apendingen - 17		

ld	Description	API Expectation	APDU Expectation
13	Compare buffer	Result is 00h	
	buffer = 04 00 01 0F		
14	Initialize dstBuffer dstBuffer = 55 55 55		
	Successful call	Result of findAndcopyValue() is	
	findAndCopyValue()	15	
	tag = 0Dh, occurrence = 1		
	valueOffset = 2		
	<pre>dstBuffer.length = 20 dstOffset = 3</pre>		
	dstLength = 12		
15	Compare buffer	Result is 00h	
	buffer = 55 55 55 01 02		
	03 04 05 06 07		
	08 09 0A 0B 0C		
4.0	55 55 55 55 55		
16	Append a Text String TLV findAndCopyValue()		
	tag = 0D		
	buffer = 00 11 22 33 44 55 (no specific		
	DCS byte)	Deput of find And Compa / - tro- ():	
	Successful call findAndCopyValue()	Result of findAndCopyValue() is 17	
	tag = 0Dh, occurrence = 1		
	valueOffset = 0		
	dstBuffer.length = 17		
	<pre>dstOffset = 0 dstLength = 17</pre>		
17	Compare buffer	Result is 00h	
	buffer = 04 00 01 0F		
40	Consequent of II	Deput of find And Orani V. L. O. C.	
18	Successful call findAndCopyValue()	Result of findAndCopyValue() is 6	
	tag = 0Dh, occurrence = 2		
	valueOffset = 0		
	<pre>dstBuffer.length = 6 dstOffset = 0</pre>		
	dstLength = 6		
19	Compare buffer	Result is 00h	
	buffer = 00 11 22 33 44 55		
	Indialization the house the state of access to		
20	Initialize the handler with 81 03 01 21 00 82 02 81 02 0D 11 04 00 01 0F		
	01 02 0D 11 04 00 01 UF		
	Successful call (with tag 8Dh)	Result of findAndcopyValue() is	
	findAndCopyValue()	17	
	tag = 8Dh occurrence = 1		
	valueOffset = 0		
	dstBuffer.length = 17		
	dstOffset = 0		
21	dstLength = 17 Compare buffer	Result is 00h	
- 1	buffer = 04 00 01 0F	Toodit io ooil	
22	Append tag 0Fh		
	buffer = 00 01 0F	Popult of find Androny (Alvis (Vic	
	Successful call (with tag 8Fh) findAndCopyValue()	Result of findAndcopyValue() is 16	
	tag = 8Fh		
	occurrence = 1		
	<pre>valueOffset = 0 dstBuffer.length = 16</pre>		
	dstOffset = 0		
	dstLength = 16		
23	Compare buffer	Result is 00h	
	buffer = 00 01 0F		
24	Invalid parameter	ToolkitException.BAD_INPUT_PA	
	findAndCopyValue()	RAMETER is thrown	
	occurrence = 0		

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

Test Area Reference Api_2_Bte_Facrb_Bs.

5.2.10.13.1 Conformance requirement

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

5.2.10.13.1.1 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 Comprehension TLV is less than that in compareBuffer returns -1.
- CRRN5: if the first miscomparing byte in Comprehension TLV is greater than that in compareBuffer returns 1.
- CRRN6: The search method is comprehension required flag independent.

5.2.10.13.1.2 Parameter errors

- CRRP1: if compareBuffer is null NullPointerException shall be thrown.
- CRRP2: if compareOffset would cause access outside array bounds ArrayIndexOutOfBoundsException shall be thrown.

5.2.10.13.1.3 Context errors

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

5.2.10.13.2 Test area files

Test Source: Test_Api_2_Bte_Facrb_Bs.java.

Test Applet: Api_2_Bte_Facrb_Bs_1.java.

Cap File: api_2_bte_facrb_bs.cap.

5.2.10.13.3 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 BERTLVEdit Handler

5.2.10.13.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using	AFT Expectation	AF DO Expectation
U	buildTLVHandler() with type		
	BER EDIT HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	Initialize the handler with		
l '	81 03 01 21 00 82 02 81 82		
	findAndCompareValue() with a null dstBuffer	NullPointerException is thrown	
	midAndoomparevalue() with a num dstbuner	Num officerException is thrown	
2	Initialize the handler with 81 03 01 21 00 82 02		
_	81 02 0D 10 04 00 01 0E		
	01 02 05 10 04 00 01 02		
	compareOffset > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	tag = 0Dh	II IS UIIOWII	
	compareBuffer.length = 20		
	compareOffset = 21		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	compareBuffer.length = 20		
	compareOffset = -1		
4	length > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	compareBuffer.length = 15		
	compareOffset = 0		
5	compareOffset + length >	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	compareBuffer.length		
	compareBuffer.length = 20		
	compareOffset = 5		
6	Initialize the handler with 81 03 01 21 00 82 02		
0	81 02 0D 11 04 00 01 0F		
	01 02 00 11 04 00 01 01		
	Select a TLV (tag 02h)		
	findAndCompareValue()	ToolkitException.UNAVAILABLE_	
	tag = 03h	ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE	
	, g	ELEMENT is thrown.	
7	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 11 04 00 01 0F		
	0.0202 0.000 0.		
	Initialize compareBuffer		
	compareBuffer =		
	04 00 01 OF		
	Compare buffers	Result is 00h	
	findAndCompareValue()		
	tag = 0Dh		
	compareOffset = 0		
8	Verify current TLV	Result is 17	
	getValueLength()		

ld	Description	API Expectation	APDU Expectation
9	Initialize compareBuffer	Al I Expediation	AI DO EXPECTATION
٦	compareBuffer =		
	04 00 01 10		
	Compare buffers with same parameters	Result is -1	
L			
10	Initialize compareBuffer		
	compareBuffer =		
	03 00 01 0F		
	Compare buffers with same parameters	Result is +1	
11	Initialize 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	
	findAndCompareValue()		
	<pre>compareOffset = 2</pre>		
12	append a Text String TLV		
	tag = 0Dh		
	buffer = 00 11 22 33 44 55		
	Initialize 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	
	findAndCompareValue()		
	<pre>compareOffset = 2</pre>		
13	Initialize compareBuffer		
13	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	
	findAndCompareValue()	1/e2011 12 - 1	
	compareOffset = 2		
L	-		
14	Initialize compareBuffer		
	compareBuffer =		
	55 55 04 00 01 02 03 04 05 06		
	07 08 09 0A 0B		
L	OC OD OD 10 55		
	Compare buffers	Result is +1	
	findAndCompareValue()		
	compareOffset = 2		
15	Initialize the handler with 81 03 01 21 00 82 02		
15	81 02 0D 11 04 00 01 0F		
	0.02001104000101		
	Initialize compareBuffer		
	CompareBuffer = 04 00 01 0F		
	Successful call (with tag 8Dh)	Result is 00h	
	findAndCompareValue()		
	<pre>tag = 8Dh compareBuffer.length = 17</pre>		
	compareOffset = 0		
16	Append tag 0Fh		
	buffer = 00 01 0F		
	Initialize compareBuffer		
	compareBuffer = 00 01 0F	Deput is 00h	
	Successful call (with tag 8Fh) findAndCompareValue()	Result is 00h	
	tag = 8Fh		
	compareBuffer.length = 16		
	compareOffset = 0		
		•	

ld	Description	API Expectation	APDU Expectation
17	Initialize compareBuffer		
	compareBuffer = 00 99 01 03 0F		
	Successful call (with tag 8Fh)	Result is +1	
	findAndCompareValue()		
	tag = 8Fh		
	compareBuffer.length = 16		
	compareOffset = 0		

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

Test Area Reference Api_2_Bte_Facrbbs_Bss.

5.2.10.14.1 Conformance requirement

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

5.2.10.14.1.1 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 Comprehension TLV is less than that in compareBuffer -1 is returned.
- CRRN5: if the first miscomparing byte in Comprehension TLV is greater than that in compareBuffer 1 is returned.
- CRRN6: The search method is comprehension required flag independent.

5.2.10.14.1.2 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 is negative or valueOffset + dstLength > current TLV length, 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.

5.2.10.14.1.3 Context errors

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

5.2.10.14.2 Test area files

Test Source: Test_Api_2_Bte_Facrbbs_Bss.java.

Test Applet: Api_2_Bte_Facrbbs_Bss_1.java.

Cap File: api_2_bte_facrbbs_bss.cap.

5.2.10.14.3 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 BERTLVEdit Handler

5.2.10.14.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		•
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	Initialize the handler with		
	81 03 01 21 00 82 02 81 82		
	findAndCompareValue() with a null	NullPointerException is thrown	
	compareBuffer	_	
	·		
2	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 10 04 00 01 0E		
	compareOffset > compareBuffer.length	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	tag = 0Dh, occurrence = 1	I io anown	
	valueOffset = 0		
	compareBuffer.length = 5		
	compareOffset = 6		
	compareLength = 0		
3	compareOffset < 0	ArrayIndexOutOfBoundsExceptio	
	findAndCompareValue()	n is thrown	
	compareBuffer.length = 5		
	<pre>compareOffset = -1 compareLength = 1</pre>		
4	compareLength >compareBuffer.length	A manufactory of Other and Even atte	
4	findAndCompareValue()	ArrayIndexOutOfBoundsException is thrown	
	compareBuffer.length = 5	II IS UIIOWII	
	compareOffset = 0		
	compareLength = 6		
5	compareOffset + compareLength	ArrayIndexOutOfBoundsExceptio	
	>compareBuffer.length	n is thrown	
	findAndCompareValue()		
	compareBuffer.length = 5		
	compareOffset = 3		
	compareLength = 3		

ld	Description	API Expectation	APDU Expectation
6	compareLength < 0	ArrayIndexOutOfBoundsExceptio	- 1
	findAndCompareValue()	n is thrown	
	compareBuffer.length = 5		
	<pre>compareOffset = 0 compareLength = -1</pre>		
	comparedengen = -1		
7	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 06 04 00 01 04		
	valueOffset > Text String Length	ToolkitException.OUT_OF_TLV_	
	<pre>findAndCompareValue() tag = 0Dh, occurrence = 1</pre>	BOUNDARIES is thrown	
	valueOffset = 7		
	compareBuffer.length = 15		
	<pre>compareOffset = 0 compareLength = 0</pre>		
8	valueOffset < 0	ToolkitException.OUT_OF_TLV_	
	findAndCompareValue()	BOUNDARIES is thrown	
	valueOffset = -1		
	<pre>compareBuffer.length = 15 compareOffset = 0</pre>		
	compareLength = 1		
9	compareLength > Text String length	ToolkitException.OUT_OF_TLV_	
	findAndCompareValue()	BOUNDARIES is thrown	
	<pre>valueOffset = 0 compareBuffer.length = 15</pre>		
	compareOffset = 0		
	compareLength = 7		
10	valueOffset + compareLength > Text String	ToolkitException.OUT_OF_TLV_	
	length	BOUNDARIES is thrown	
	<pre>findAndCompareValue() valueOffset = 2</pre>		
	compareBuffer.length = 15		
	compareOffset = 0		
	compareLength = 5		
11	Invalid parameter	ToolkitException.BAD_INPUT_PA	
	findAndCompareValue()	RAMETER is thrown	
	occurrence = 0		
12	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 11 04 00 01 0F		
	Select a TLV (tag 02h)		
	findAndCompareValue()	ToolkitException.UNAVAILABLE_	
	tag = 0Dh occurrence = 2	ELEMENT is thrown	
	Call the getValueLength() method	ToolkitException.UNAVAILABLE_	
		ELEMENT is thrown.	
13	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 11 04 00 01 0F		
	Initialize compareBuffer		
1	compareBuffer =		
	04 00 01 0F	D W. OO	
1	<pre>findAndCompareValue() tag = 0Dh, occurrence = 1</pre>	Result is 00h	
1	valueOffset = 0		
1	compareOffset = 0		
	compareLength = 17		
14	Verify current TLV	Result is 17	
'*	getValueLength()	TOSUIL IS 17	
15	Initialize compareBuffer		
1	compareBuffer = 04 00 01 02 03 04 05 06 07 08 09 0A 0B 0C		
1	0D 0E 10		
	Compare buffers with same parameters	Result is -1	
	·		

Id	DU Expectation
CompareBuffer =	
17	
Initialize compareBuffer	
CompareBuffer =	
CompareBuffer =	
55 55 55 01 02	
08 09 0A 0B 0C 55 55 55 55 55 Compare buffers FindAndCompareValue() valueOffset = 2 compareDeffer = 3 compareLength = 12 18 Initialize compareBuffer	
Compare buffers Result is 00h	
Compare buffers	
findAndCompareValue() valueOffset = 2 compareOffset = 3 compareLength = 12 18 Initialize 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 19 Initialize compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0A 0D	
compareOffset = 3	
CompareLength = 12	
18	
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 Initialize compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0A 0D	
03 04 05 06 07 08 09 0A 0B 0C 55 55 55 55 55 Compare buffers with same parameters Result is -1 19	
08 09 0A 0B 0C 55 55 55 55 Compare buffers with same parameters Result is -1 19 Initialize compareBuffer compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0A 0D	
Compare buffers with same parameters Result is -1	
19	
compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0A 0D	
compareBuffer = 55 55 55 01 02 03 04 05 06 07 08 09 0A 0A 0D	
03 04 05 06 07 08 09 0A 0A 0D	
08 09 0A 0A 0D	
وی وی در دو دو	
Compare buffers with same parameters Result is +1	
20 append a Text String TLV	
tag = 0Dh buffer = 00 11 22 33 44 55	
Initialize compareBuffer	
compareBuffer =	
04 00 01 0F	
findAndCompareValue() Result is 00h	
tag = 0Dh, occurrence = 1 valueOffset = 0	
compareOffset = 0	
compareLength = 17	
21 Initialize compareBuffer	
compareBuffer =	
00 11 22 33 44 55	
findAndCompareValue() Result is 00h	
tag = 0Dh, occurrence = 2 valueOffset = 0	
ValueOffset = 0	
compareLength = 6	
laitialina sauran P. #	
22 Initialize compareBuffer compareBuffer =	
00 11 22 33 44 66	
findAndCompareValue() Result is -1	
tag = 0Dh, occurrence = 2	
valueOffset = 0	
compareOffset = 0 compareLength = 6	

ld	Description	API Expectation	APDU Expectation
23	Initialize the handler with 81 03 01 21 00 82 02	·	
	81 02 0D 11 04 00 01 0F		
	Initialize compareBuffer		
	CompareBuffer = 04 00 01 0F		
	Successful call (with tag 8Dh)	Result is 00h	
	findAndCompareValue()		
	tag = 8Dh, occurrence = 1		
	<pre>valueOffset = 0</pre>		
	compareBuffer.length = 17		
	compareOffset = 0		
ļ	compareLength = 17		
24	Append tag 0Fh		
	buffer = 00 01 0F		
	Initialize compareBuffer		
	compareBuffer = 00 01 0F		
	Successful call (with tag 8Fh)	Result is 00h	
	findAndCompareValue()		
	tag = 8Fh, occurrence = 1		
	<pre>valueOffset = 0</pre>		
	compareBuffer.length = 16		
	compareOffset = 0		
	compareLength = 16		
25	Initialize compareBuffer		
	compareBuffer =0099 02 0F		
	findAndCompareValue()	Result is +1	
	tag = 0Dh, occurrence = 1		
	<pre>valueOffset = 0</pre>		
	compareOffset = 0		
	compareLength = 17		

5.2.10.15 Method getCapacity

Test Area Reference: Api_2_Bte_Gcap.

5.2.10.15.1 Conformance requirement

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

public byte getCapacity()

5.2.10.15.1.1 Normal execution

• CRRN1: The method shall return the maximum size of the Comprehension TLV list managed by the handler.

5.2.10.15.1.2 Parameter errors

No requirements

5.2.10.15.1.3 Context errors

No requirements

5.2.10.15.2 Test area files

Test Source: Test_Api_2_Bte_Gcap.java.

Test Applet: Api_2_Bte_Gcap_1.java.

Cap File: api_2_bte_gcap.cap.

5.2.10.15.3 Test coverage

CRR number	Test case number
N1	1

5.2.10.15.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x10 and set		
	its BER Tag to 0x01		
		1- No exception is thrown, the	
	BERTLVEditHandler	capacity shall be 0x10	
	2- The applet fills the handler with the	2- No exception is thrown	
	maximum capacity, using appendTLV() method	2 Tto exception to the own	
	3- The applet calls clear() on the	2. No expendion is through	
	BERTEVEGIC Hanarer	3- No exception is thrown	
	4- The applet fills the handler with the		
	maximum capacity plus one, using	4- HANDLER_OVERFLOW	
	appendTLV() method	exception is thrown	

5.2.10.16 Method getValueShort

Test Area Reference: Api_2_Bte_Gvsh.

5.2.10.16.1 Conformance requirement

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

5.2.10.16.1.1 Normal execution

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

5.2.10.16.1.2 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.

5.2.10.16.1.3 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.

5.2.10.16.2 Test area files

Specific triggering: None.

Test Source: Test_Api_2_Bte_Gvsh.java.

Test Applet: Api_2_Bte_Gvsh_1.java.

Cap File: api_2_bte_gvsh.cap.

5.2.10.16.3 Test coverage

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

5.2.10.16.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
ļ	set its BER Tag to 0x01		
1	Initialize the handler		
	with 81 03 01 FF FE 82 02 81 FD		
	getValueShort(0)	ToolkitException.UNAVAILABLE_ ELEMENT is thrown	
2	Search TLV 01h (Command Details TLV)	EEEMERT IS UNOW!	
	getValueShort(3)	ToolkitException.OUT_OF_TLV_ BOUNDARIES is thrown	
3	Search TLV 01h (Command Details TLV)		
	getValueShort(1)	Result is FFh Feh (type, qualifier)	
4	Search TLV 02h (Device Identities TLV)		
	getValueShort(0)	Result is 81h FDh (Source,	
	-	Destination)	
5	Initialize the handler with 81 03 01 21 00 82 02	,	
	81 02 0D 7F 04 00 01 7D		
	Search TLV 0Dh (Text String TLV)		
	getValueShort(7D)	Result is 7Ch 7Dh	
6	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 81 80 04 00 01 7E		
	Search TLV 0Dh (Text String TLV)		
	getValueShort(7D)	Result is 7Ch 7Dh	
7	getValueShort(7E)	Result is 7Dh 7Eh	
8	Initialize the handler with 81 03 01 21 00 82 02		
	81 02 0D 81 F1 04 00 01 EF		
	Search TLV 0Dh (Text String TLV)		
	getValueShort(EF)	Result is Eeh Efh	

5.2.10.17 Method appendArray

Test Area Reference: Api_2_Bte_Apda.

5.2.10.17.1 Conformance requirement

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

5.2.10.17.1.1 Normal execution

- CRRN1: appends a buffer into the Edithandler buffer.
- CRRN2: a successful append does not modify the TLV selected.

5.2.10.17.1.2 Parameter errors

- 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.

5.2.10.17.1.3 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.

5.2.10.17.2 Test area files

Test Source: Test_Api_2_Bte_Apda.java.

Test Applet: Api_2_Bte_Apda _1.java.

Cap File: api_2_bte_apda.cap.

5.2.10.17.3 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 BERTLVEdit Handler

5.2.10.17.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using	·	•
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
<u> </u>	set its BER Tag to 0x01		
1	Null buffer	NullPointerException is thrown	
<u> </u>	appendArray()	1	
2	offset > buffer.length	ArrayIndexOutOfBoundsExceptio	
	appendArray()	n is thrown	
	<pre>buffer.length = 5 offset = 6</pre>		
	length = 0		
3	offset < 0	ArrayIndexOutOfBoundsExceptio	
3	appendArray()	n is thrown	
	buffer.length = 5	n is thrown	
	offset = -1		
	length = 1		
4	length > buffer.length	ArrayIndexOutOfBoundsExceptio	
	appendArray()	n is thrown	
	buffer.length = 5		
	offset = 0		
<u> </u>	length = 6		
5	offset + length > buffer.length	ArrayIndexOutOfBoundsExceptio	
	appendArray()	n is thrown	
	<pre>buffer.length = 5 offset = 3</pre>		
	length = 3		
6	length < 0	ArrayIndexOutOfBoundsExceptio	
	appendArray()	n is thrown	
	buffer.length = 5	II 15 UIIOWII	
	offset = 0		
	length = -1		

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using	•	•
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
7	set its BER Tag to 0x01 Handler overflow exception	ToolkitEveention HANDLED OVE	
′	appendArray()	ToolkitException.HANDLER_OVE RFLOW is thrown	
	buffer.length = getCapacity()+1	RFLOW IS UITOWIT	
	offset = 0		
	<pre>length = getCapacity()+1</pre>		
8	Initialize handler with		
	81 03 01 00 00 82 02 81 00		
	Select Command Details TLV		
	Successful call		
	<pre>appendArray() buffer = FF FE F8</pre>		
	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	Donalt of	
	Compare the arrays compareBuffer = FF FE F8	Result of	
	Comparebuller = rr rr ro	javacard.framework.Util.arrayCom pare() is 00h	
10	Successful call	pare() is oon	
10	appendArray()		
	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.arrayCom	
11	Successful call	pare() is 00h	
11	appendArray()		
	buffer = 11 22 88		
	offset = 2		
	length = 4		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = FF FE F8 02 03 07 33 44 55 66	javacard.framework.Util.arrayCom	
10		pare() is 00h	
12	Clear the handler		
	Successful call appendArray()		
	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.arrayCom	
		pare() is 00h	

5.2.10.18 Method appendTLV(byte tag, byte value)

Test Area Reference: Api_2_Bte_Aptlbb.

5.2.10.18.1 Conformance requirement

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

```
\begin{array}{c} \text{public void appendTLV (byte tag, byte value)} \\ & \text{throws ToolkitException} \end{array}
```

5.2.10.18.1.1 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.

5.2.10.18.1.2 Parameter errors

No requirements.

5.2.10.18.1.3 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.

5.2.10.18.2 Test area files

Test Source: Test_Api_2_Bte_Aptlbb.java.

Test Applet: Api_2_Bte_Aptlbb_1.java.

Cap File: api_2_bte_aptlbb.cap.

5.2.10.18.3 Test coverage

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

5.2.10.18.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	Call appendArray()		
	<pre>length = getCapacity()-1</pre>		
	Handler Overflow exception:	ToolkitException.HANDLER_OVE	
	Call the appendTLV() method	RFLOW is thrown	
2	Initialize handler with		
	81 03 01 00 00 82 02 81 00		
	Select Command Details TLV		
	Call the appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	
3	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 84h		
	value = 00h		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 01 00	javacard.framework.Util.arrayCom	
		pare() is 00h	

ld	Description	API Expectation	APDU Expectation
4	Successful call		
	appendTLV()		
	tag = 01h		
	value = FEh		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 01 00 01 01 FE	javacard.framework.Util.arrayCom	
		pare() is 00h	
5	Clear the handler		
	Call appendArray()		
	length = 250		
	buffer = 00 81 F7 03 04 F9		
	Successful call		
	appendTLV()		
	tag = 84h		
	value = 00h		
	Call getLength() method	result = 253	
	Call copy() method		
	Compare the array	Result of	
	compareBuffer = 00 81 F7 03 04 F9 84 01	javacard.framework.Util.arrayCom	
	00	pare() is 00h	

5.2.10.19 Method appendTLV(byte tag, byte value1, byte value2)

Test Area Reference: Api_2_Bte_Aptlbbb.

5.2.10.19.1 Conformance requirements

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

5.2.10.19.1.1 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.

5.2.10.19.1.2 Parameter errors

No requirements.

5.2.10.19.1.3 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.

5.2.10.19.2 Test area files

Test Source: Test_Api_2_Bte_Aptlbbb.java.

Test Applet: Api_2_Bte_Aptlbbb_1.java.

Cap File: api_2_bte_aptlbbb.cap.

5.2.10.19.3 Test coverage

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

5.2.10.19.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		•
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	Call the appendArray()		
	<pre>length = getCapacity()-1</pre>		
	Handler Overflow exception:	ToolkitException.HANDLER_OVE	
	Call the appendTLV() method	RFLOW is thrown	
2	Initialize handler with		
	81 03 01 00 00 82 02 81 00		
	Select Command Details TLV		
	Call the appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	
3	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 84h		
	value1 = 00h		
	value2 = 01h		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 02 00 01	javacard.framework.Util.arrayCom	
		pare() is 00h	
4	Successful call		
	appendTLV()		
	tag = 01h		
	value1 = FEh		
	value2 = FDh		
-	Call copy() method	Decrit of	
	Compare the arrays compareBuffer = 84 02 00 01 01 02 FE FD	Result of	
	comparesurrer = 84 02 00 01 01 02 FE FD	javacard.framework.Util.arrayCom	
L_		pare() is 00h	
5	Clear the handler		
	Call appendArray()		
	length = 249		
	buffer = 00 81 F6 03 04 F8		
	Successful call		
	appendTLV() tag = 84h		
	value1 = 00h		
	value2 = 01h		
	Call getLength() method	result = 253	
	Call copy() method		
	Compare handler	Result of	
	compareBuffer = 00 81 F6 03 04 F8 84 02	javacard.framework.Util.arrayCom	
	00 01	pare() is 00h	
		paie() is ouii	

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

Test Area Reference: Api_2_Bte_Aptlb_Bss.

5.2.10.20.1 Conformance requirement

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

5.2.10.20.1.1 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.

5.2.10.20.1.2 Parameter errors

- 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.

5.2.10.20.1.3 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.

5.2.10.20.2 Test area files

Test Source: Test_Api_2_Bte_Aptlb_Bss.java.

Test Applet: Api_2_Bte_Aptlb_Bss_1.java.

Cap File: api_2_bte_aptlb_bss.cap.

5.2.10.20.3 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 BERTLVEdit Handler
C3	8

5.2.10.20.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using	•	•
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
ļ	set its BER Tag to 0x01		
1	Null value	NullPointerException is thrown	
	appendTLV()		
2	valueOffset > value.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value.length = 5		
	<pre>valueOffset = 6 valueLength = 0</pre>		
3	valueOffset < 0	ArrayIndexOutOfBoundsExceptio	
3	appendTLV()	n is thrown	
	value.length = 5	n is thrown	
	valueOffset = -1		
	valueLength = 1		
4	valueLength > value.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value.length = 5		
	valueOffset = 0		
	valueLength = 6		
5	valueOffset + valueLength > value.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value.length = 5		
	<pre>valueOffset = 3 valueLength = 3</pre>		
6	valueLength < 0	ArrayIndexOutOfBoundsExceptio	
0	appendTLV()	n is thrown	
	value.length = 5	II IS UIIOWII	
	valueOffset = 0		
	valueLength = -1		
7	Handler overflow exception	ToolkitException.HANDLER_OVE	
	Call the appendArray() method, length =	RFLOW is thrown	
	getCapacity()-1		
	appendTLV()		
	<pre>value.length = 254 valueOffset = 0</pre>		
	valueLength = 254		
8	Bad parameter exception	ToolkitException.BAD_INPUT_PA	
"	Clear the handler	RAMETER is thrown	
	appendTLV()	TO WILL FER 13 UIIOWII	
	value.length = 256		
	valueOffset = 0		
	valueLength = 256		
9	Initialize handler with		
	81 03 01 00 00 82 02 81 00		
	Select Command Details TLV		
	Successful call		
	appendTLV()		
	tag = 04		
	<pre>value = FF FE F8 valueOffset = 0</pre>		
	valueLength = 8		
	Verify Current TLV: Call getValueLength()	Result is 03h	
10	Clear the handler	TOOME TO COM	
'0	Successful call		
	appendTLV()		
	tag = 04		
	value = FF FE F8		
	valueOffset = 0		
	valueLength = 8		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 04 08 FF FE F8	javacard.framework.Util.arrayCom	
		pare() is 00h	
	•	v	

ld	Description	API Expectation	APDU Expectation
11	Successful call	·	·
	appendTLV()		
	tag = 85h		
	value = 00 01 07		
	valueOffset = 2		
	valueLength = 6		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 04 08 FF FE F8 85 06 02	javacard.framework.Util.arrayCom	
	03 07	pare() is 00h	
12	Successful call		
	appendTLV()		
	tag = 01		
	value = 11 22 88		
	valueOffset = 2		
	valueLength = 4		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 04 08 FF FE F8 85 06 02	javacard.framework.Util.arrayCom	
	03 07 01 04 33 44 55 66	pare() is 00h	
13	Clear the handler	i v	
	Successful call		
	appendTLV()		
	tag = 04		
	value = 00 01 7F		
	<pre>valueOffset = 0</pre>		
	valueLength = 80h		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 04 81 80 00 017F	javacard.framework.Util.arrayCom	
		pare() is 00h	
14	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 04		
	value = 00 01 F9		
	valueOffset = 0		
	valueLength = 250		
	Call getLength() method	result = 253	
	Call copy() method		
	Compare handler	Result of	
	compareBuffer = 04 81 FA 00 01F9	javacard.framework.Util.arrayCom	
		pare() is 00h	

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

 $Test\ Area\ Reference:\ Api_2_Bte_Aptlbb_Bss.$

5.2.10.21.1 Conformance requirement

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

5.2.10.21.1.1 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.

5.2.10.21.1.2 Parameter errors

- 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.

5.2.10.21.1.3 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.

5.2.10.21.2 Test area files

Test Source: Test_Api_2_Bte_Aptlbb_Bss.java.

Test Applet: Api_2_Bte_Aptlbb_Bss_1.java.

Cap File: api_2_bte_aptlbb_bss.cap.

5.2.10.21.3 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 BERTLVEdit Handler
C3	8

5.2.10.21.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	Null value2	NullPointerException is thrown	
	appendTLV()	·	
2	value2Offset > value2.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value2.length = 5		
	value2Offset = 6		
	value2Length = 0		
3	value2Offset < 0	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value2.length = 5		
	value2Offset = -1		
	value2Length = 1		

ld	Description	API Expectation	APDU Expectation
4	value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	De Expodution
'	appendTLV()	n is thrown	
	value2.length = 5		
	value2Offset = 0		
	value2Length = 6		
5	value2Offset + value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
	<pre>appendTLV() value2.length = 5</pre>	n is thrown	
	value20ffset = 3		
	value2Length = 3		
6	value2Length < 0	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value2.length = 5		
	value2Offset = 0		
7	value2Length = -1	ToolkitEveentien HANDLED OVE	
7	Handler overflow exception Call the appendArray() method, length =	ToolkitException.HANDLER_OVE RFLOW is thrown	
	getCapacity()-1	RFLOW IS thrown	
	appendTLV()		
	value2.length = 254		
	<pre>value20ffset = 0</pre>		
	value2Length = 254		
8	Bad parameter exception	ToolkitException.BAD_INPUT_PA	
	Clear the handler appendTLV()	RAMETER is thrown	
	value2.length = 256		
	value20ffset = 0		
	value2Length = 256		
9	Initialize handler with		
	81 03 01 00 00 82 02 81 00		
	Select Command Details TLV		
	Successful call		
	appendTLV()		
	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		
	appendTLV()		
	tag = 04 value1 = 05		
	value2 = FF FE F8		
	value2Offset = 0		
	value2Length = 8		
	Call copy() method		
	Compare the arrays	Result of	
	CompareBuffer = 04 09 05 FF FE F8	javacard.framework.Util.arrayCom	
<u></u>	0 ()	pare() is 00h	
11	Successful call		
	appendTLV() tag = 85h		
	value1 = 55h		
	value2 = 00 01 07		
	value2Offset = 2		
	value2Length = 6		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 04 09 05 FF FE F8	javacard.framework.Util.arrayCom	
	85 07 55 02 03 07	pare() is 00h	
	05 07 55 02 05 07	1	

ld	Description	API Expectation	APDU Expectation
12	Successful call		
	appendTLV()		
	tag = 01		
	value1 = 44h		
	value2 = 11 22 88		
	value2Offset = 2		
	value2Length = 4		
	Call copy() method		
	Compare the arrays	Result of	
	CompareBuffer =	javacard.framework.Util.arrayCom	
	04 09 05 FF FE F8	pare() is 00h	
	85 07 55 02 03 07		
	01 05 44 33 44 55 66		
13	Clear the handler		
	Successful call		
	appendTLV()		
	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.arrayCom	
		pare() is 00h	
14	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 04		
	value1 = 00		
	value2 = 01 F9		
	value2Offset = 0		
	value2Length = 249		
	Call getLength() method	result = 253	
	Call copy() method		
	Compare handler	Result of	
	compareBuffer = 04 81 FA 00 01F9	javacard.framework.Util.arrayCom	
		pare() is 00h	

5.2.10.22 Method appendTLV(byte tag, byte value1, short value2)

Test Area Reference: Api_2_Bte_Aptlbbs.

5.2.10.22.1 Conformance requirements

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

5.2.10.22.1.1 Normal execution

- CRRN1: Appends a TLV element to the current TLV list (3-byte element(1-byte,1-short)).
- CRRN2: A successful append does not modify the TLV selected.

5.2.10.22.1.2 Parameter errors

No requirements

5.2.10.22.1.3 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.

5.2.10.22.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Bte_Aptlbbs.java.

Test Applet: Api_2_Bte_Aptlbbs_1.java.

Cap File: api_2_bte_aptlbbs.cap.

5.2.10.22.3 Test coverage

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

5.2.10.22.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	Call the appendArray()		
	length = getCapacity()-1		
	Handler Overflow exception:	ToolkitException.HANDLER_OVE	
	Call the appendTLV() method	RFLOW is thrown	
2	Initialize handler with		
	81 03 01 00 00 82 02 81 00		
	Select Command Details TLV		
	Call the appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	
3	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 84h		
	value1 = 00h		
	value2 = 01h 02h		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 03 00 01 02	javacard.framework.Util.arrayCom	
		pare() is 00h	
4	Successful call		
	appendTLV()		
	tag = 01h		
	value1 = FEh		
	value2 = FDh FCh		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 03 00 01 02 01 03 FE FD	javacard.framework.Util.arrayCom	
	FC	pare() is 00h	

ld	Description	API Expectation	APDU Expectation
5	Clear the handler		
	Call appendArray()		
	length = 248		
	buffer = 00 81 F5 03 04 F7		
	Successful call		
	appendTLV()		
	tag = 84h		
	value1 = 00h		
	value2 = 01h 02h		
	Call getLength() method	result = 253	
	Call copy() method		
	Compare handler	Result of	
	compareBuffer = 00 81 F5 03 04 F7 84 03 00	javacard.framework.Util.arrayCom	
	01 02	pare() is 00h	

5.2.10.23 Method appendTLV(byte tag, short value)

Test Area Reference: Api_2_Bte_Aptlbs.

5.2.10.23.1 Conformance requirements

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

5.2.10.23.1.1 Normal execution

- CRRN1: Appends a TLV element to the current TLV list (2-byte or 1-short element).
- CRRN2: A successful append does not modify the TLV selected.

5.2.10.23.1.2 Parameter errors

No requirements

5.2.10.23.1.3 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.

5.2.10.23.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Bte_Aptlbs.java.

Test Applet: Api_2_Bte_Aptlbs_1.java.

Cap File: api_2_bte_aptlbs.cap.

5.2.10.23.3 Test coverage

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

5.2.10.23.4 Test procedure

ld	Description	API Expectation	APDU Expectation
	Get a BERTLVEditHandler using		
	buildTLVHandler() with type BER_EDIT_HANDLER		
	and capacity 0x100 and set its BER Tag to		
	0x01		
1	Call appendArray()		
	length = getCapacity()-1	T 11:55 6 11AND1 50 0	
	Handler Overflow exception:	ToolkitException.HANDLER_O	
	Call the appendTLV() method	VERFLOW is thrown	
2	Initialize handler with		
	81 03 01 00 00 82 02 81 00		
	Select Command Details TLV		
	Call the appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	
3	Clear the handler		
	Successful call		
ā	appendTLV()		
1	tag = 84h		
7	value = 00h 01h		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 02 00 01	javacard.framework.Util.arrayC	
		ompare() is 00h	
4	Successful call		
	appendTLV()		
	tag = 01h		
	value = FEh FFh		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 02 00 01 01 02 FE FF	javacard.framework.Util.arrayC	
		ompare() is 00h	
5	Clear the handler		
	Call appendArray()		
	length = 249		
	buffer = 00 81 F6 03 04 F8		
	Successful call		·
	appendTLV()		
	tag = 84h		
7	value = 00h 01h		
	Call getLength() method	result = 253	
	Call copy() method		
	Compare the array	Result of	
	compareBuffer = 00 81 F6 03 04 F8 84 02 00 01	javacard.framework.Util.arrayC	

5.2.10.24 Method appendTLV(byte tag, short value1, short value2)

Test Area Reference: Api_2_Bte_Aptlbss.

5.2.10.24.1 Conformance requirements

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

5.2.10.24.1.1 Normal execution

- CRRN1: Appends a TLV element to the current TLV list (4-byte element(2-short)).
- CRRN2: A successful append does not modify the TLV selected.

5.2.10.24.1.2 Parameter errors

No requirements

5.2.10.24.1.3 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.

5.2.10.24.2 Test area files

Specific triggering: Unrecognized Envelope:

Test Source: Test_Api_2_Bte_Aptlbss.java.

Test Applet: Api_2_Bte_Aptlbss_1.java.

Cap File: api_2_bte_aptlbss.cap.

5.2.10.24.3 Test coverage

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

5.2.10.24.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using	•	•
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	Call the appendArray()		
	<pre>length = getCapacity()-1</pre>		
	Handler Overflow exception:	ToolkitException.HANDLER_OVE	
	Call the appendTLV() method	RFLOW is thrown	
2	Initialize handler with		
	81 03 01 00 00 82 02 81 00		
	Select Command Details TLV		
	Call the appendTLV() method		
	Verify Current TLV: Call getValueLength()	Result is 03h	
3	Clear the handler		
	Successful call		
	appendTLV()		
	tag = 84h		
	value1 = 00h 01h		
	value2 = 02h 03h		
	Call copy() method		
	Compare the arrays	Result of	
	compareBuffer = 84 04 00 01 02 03	javacard.framework.Util.arrayCom	
		pare() is 00h	
4	Successful call		
	appendTLV()		
	tag = 01h value1 = FEh FDh		
	value1 = FEn FDn value2 = FCh FBh		
	Call copy() method		
	Compare the arrays	Result of	
		javacard.framework.Util.arrayCom	
	FC FB		
	FU FD	pare() is 00h	

ld	Description	API Expectation	APDU Expectation
5	Clear the handler		
	Call appendArray()		
	length = 247		
	buffer = 00 81 F4 03 04 F6		
	Successful call		
	appendTLV()		
	tag = 84h		
	value1 = 00h 01h		
	value2 = 02h 03h		
	Call getLength() method	result = 253	
	Call copy() method		
	Compare handler	Result of	
	compareBuffer = 00 81 F4 03 04 F6 84 04 00	javacard.framework.Util.arrayCom	
	01 02 03	pare() is 00h	

5.2.10.25 Method appendTLV(byte tag, byte[] value1, short value1Offset, short value1Length, byte[] value2, short value2Offset, short value2Length)

Test Area Reference: Api_2_Bte_Aptlb_Bss_Bss.

5.2.10.25.1 Conformance requirements

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

5.2.10.25.1.1 Normal execution

- CRRN1: Appends a TLV element to the current TLV list (2 byte arrays format).
- CRRN2: A successful append does not modify the TLV selected.

5.2.10.25.1.2 Parameter errors

- CRRP1: If value1 or value2 is null, a NullPointerException is thrown.
- CRRP2: If value1Offset or value1Length or both would cause access outside value1 array bounds, or if value1Length is negative, an ArrayIndexOutOfBoundsException is thrown.
- CRRP3: If value2Offset or value2Length or both would cause access outside value2 array bounds, or if value2Length is negative, an ArrayIndexOutOfBoundsException is thrown.

5.2.10.25.1.3 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 value1Length or value2Length is greater than 255, a ToolkitException is thrown with reason code BAD_INPUT_PARAMETER.

5.2.10.25.2 Test area files

 $Test_Source: \qquad Test_Api_2_Bte_Aptlb_Bss_Bss.java.$

Test Applet: Api_2_Bte_Aptlb_Bss_Bss_1.java.

Cap File: api_2_bte_aptlb_bss_bss.cap.

5.2.10.25.3 Test coverage

CRR number	Test case number	
N1	18, 19, 20, 21	
N2	17	
P1	1, 2	
P2	3, 4, 5, 6, 7	
P3	8, 9, 10, 11, 12	
C1	13	
C2	Does not apply for BERTLVEdit Handler	
C3	14, 15	

5.2.10.25.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity 0x100 and		
	set its BER Tag to 0x01		
1	Null value1	NullPointerException is thrown	
	appendTLV()		
2	Null value2	NullPointerException is thrown	
	appendTLV()	•	
3	Value1Offset ≥ value1.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value1.length = 5		
	value10ffset = 5		
	<pre>value1Length = 1</pre>		
	value2.length = 5		
	<pre>value20ffset = 0</pre>		
	<pre>value2Length = 1</pre>		
4	Value1Offset < 0	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value1.length = 5		
	value10ffset = -1		
	value1Length = 1		
	value2.length = 5		
	value2Offset = 0		
<u> </u>	value2Length = 1	1 1 0 10/0	
5	Value1Length > value1.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	<pre>value1.length = 5 value10ffset = 0</pre>		
	valuelLength = 6		
	value2.length = 5		
	value20ffset = 0		
	value2Length = 1		
6	Value1Offset + value1Length > value1.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	Value1.length = 5	III IS UIIOWII	
	value10ffset = 3		
	value1Length = 3		
	value2.length = 5		
	value2Offset = 0		
	<pre>value2Length = 1</pre>		

ld	Description	API Expectation	APDU Expectation
7	Value1Length < 0	ArrayIndexOutOfBoundsExceptio	De Expediation
,	appendTLV()	n is thrown	
	value1.length = 5	II IS UIIOWII	
	value10ffset = 0		
	value1Length = -1		
	value2.length = 5		
	value20ffset = 0		
	value2Length = 1		
8	Value2Offset ≥ value2.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	<pre>value1.length = 5 value10ffset = 0</pre>		
	value1Length = 1		
	value2.length = 5		
	value20ffset = 5		
	value2Length = 1		
9	Value2Offset < 0	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	<pre>value1.length = 5 value10ffset = 0</pre>		
	valuelLength = 1		
	value2.length = 5		
	value20ffset = -1		
<u></u>	value2Length = 1		
10	Value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value1.length = 5		
	<pre>value1Offset = 0 value1Length = 1</pre>		
	value2.length = 5		
	value20ffset = 0		
	value2Length = 6		
11	Value2Offset + value2Length > value2.length	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	value1.length = 5		
	<pre>value10ffset = 0 value1Length = 1</pre>		
	Value2.length = 5		
	Value2Offset = 3		
	Value2Length = 3		
12	Value2Length < 0	ArrayIndexOutOfBoundsExceptio	
	appendTLV()	n is thrown	
	<pre>value1.length = 5 value10ffset = 0</pre>		
	value1Length = 1		
	value2.length = 5		
	value2Offset = 0		
	value2Length = -1		
13	Handler overflow exception	ToolkitException.HANDLER_OVE	
	Call the appendArray() method, length =	RFLOW is thrown	
	getCapacity()-1		
	<pre>appendTLV() Value1.length = 256</pre>		
	Value1Offset = 0		
	Value1Length = 253		
	Value2.length = 256		
	Value2Offset = 0		
4.4	Value2Length = 1	ToolkitEveenties DAD INDUT DA	
14	Bad parameter exception Clear the handler	ToolkitException.BAD_INPUT_PA RAMETER is thrown	
	appendTLV()	NAIVIETEK IS (NIOWN	
	Value1.length = 256		
	Value1Offset = 0		
	Value1Length = 256		
	Value2.length = 256		
	Value2Offset = 0 Value2Length = 1		
15	Bad parameter exception	ToolkitException.BAD_INPUT_PA	
'3	appendTLV()	RAMETER is thrown	
	Value1.length = 256	TO MAIL LEIX 13 HILLOWII	
	Value1Offset = 0		
	Value1Length = 1		
	Value2.length = 256		
	Value2Offset = 0 Value2Length = 256		
	rvaluezhenglu = Z56		

ld	Description	API Expectation	APDU Expectation
16	clear the handler, append the handler with	7.1. Expositation	7.1. 2.0 =xpootation
'0	TLVs:		
	81 03 11 22 33		
	82 02 99 77		
	Select Command Details TLV	No exceptions shall be thrown	
17	Successful call		
1	Clear the handler		
	Olear the handler		
	appendTLV()		
	tag = 04		
	value1 = FF FE F8		
	value10ffset = 0		
	value1Length = 8		
	value2 = F7 F6 F0		
	value2Offset = 0		
	value2Length = 8	Danishia 40h	
	Verify Current TLV: Call getValueLength()	Result is 10h	
40	Clear the handler		
18	Successful call		
	appendTLV()		
	tag = 04 value1 = FF FE F8		
	value10ffset = 0		
	value1Length = 8		
	value2 = F7 F6 F0		
	<pre>value20ffset = 0</pre>		
	value2Length = 8		
	Call copy() method		
	Compare handler	Result is 00	
	CompareBuffer = 04 10 FF FE F0		
19	Successful call		
	appendTLV()		
	tag = 85h		
	<pre>value1 = 00 01 07 value10ffset = 2</pre>		
	value1Length = 6		
	value2 = 08 09 0F		
	value2Offset = 2		
	value2Length = 6		
	Call copy() method		
	Compare handler	Result is 00	
	compareBuffer = 04 10 FF FE F0 85 0C 02 03		
	04 05 06 07 0A 0B 0C 0D 0E 0F		
20	Successful call		
	appendTLV()		
	tag = 01		
	<pre>value1 = 11 22 88 value10ffset = 2</pre>		
	value1Length = 4		
	value2 = 99 AA FF 00		
	value2Offset = 2		
	value2Length = 4		
	Call copy() method		
	Compare handler	Result is 00	
	compareBuffer = 04 10 FF FE F0 85 0C 02 03		
	04 05 06 07 0A 0B 0C 0D 0E 0F 01 08 33 44 55		
	66 BB CC DD EE		
	Clear the handler		
21	Successful call		
	appendTLV()		
	tag = 04 value1 = 00 01 7F		
	value10ffset = 0		
	value1Length = 80h		
	value2 = 80 81 FC		
	value2Offset = 0		
	value2Length = 7Dh		
	Call copy() method	Describie 00	
	Compare handler	Result is 00	
	compareBuffer = 04 81 FD 00 01FC		

5.2.10.26 Method clear

Test Area Reference: Api_2_Bte_Cler.

5.2.10.26.1 Conformance requirement

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

5.2.10.26.1.1 Normal execution

• CRRN1: Clears the TLV list of an EditHandler.

• CRRN2: Resets the current TLV selected.

5.2.10.26.1.2 Parameter errors

No requirements.

5.2.10.26.1.3 Context errors

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

5.2.10.26.2 Test area files

Test Source: Test_Api_2_Bte_Cler.java.

Test Applet: Api_2_Bte_Cler_1.java.

Cap File: api_2_bte_cler.cap.

5.2.10.26.3 Test coverage

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

5.2.10.26.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get a BERTLVEditHandler using		
	buildTLVHandler() with type		
	BER_EDIT_HANDLER and capacity		
	0x100 and set its BER Tag to		
	0x01		
1	Initialize the handler with	Result of getLength() is not null	
	81 03 01 00 00 82 02 81 00		
	Select Command Details TLV		
	Call the getLength() method		
	Clear the handler	Result of getLength() is 0	
	Call the getLength() method		
2	Call the getValueLength()	ToolkitException.UNAVAILABLE_ELEMENT	
	method	is thrown	

5.2.11 Interface BERTLVViewHandler

Tests are done in inheriting interfaces BERTLVEditHandler and envelopeHandler.

5.2.12 Class EnvelopeHandlerSystem

5.2.12.1 Method getTheHandler

Test Area Reference: Api_2_Ehs_Gthd.

5.2.12.1.1 Conformance requirements

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

5.2.12.1.1.1 Normal execution

- CRRN1: The method shall return the single system instance of the class implementing the EnvelopeHandler interface.
- CRRN2: The EnvelopeHandler is a Temporary JCRE Entry Point Object (see Javacard 2.2.1 Runtime Environment (JCRE) Specification [2]).

5.2.12.1.1.2 Parameter errors

No requirements.

5.2.12.1.1.3 Context errors

• CRRC1: The method shall thrown ToolkitException.HANDLER_NOT_AVAILABLE if the handler is not available.

5.2.12.1.2 Test area files

Test Source: Test_Api_2_Ehs_Gthd.java.

Test Applet: Api_2_Ehs_Gthd_1.java.

Cap File: api_2_ehs_gthd.cap.

5.2.12.1.3 Test coverage

CRR number	Test case number	
N1	1, 2, 3	
N2	checked in CAT Runtime Environment: Cre_Api_Hepo (Test case 1 and 2)	
C1	checked in CAT Runtime Environment: Cre_Mha_Enhd (Test case 1)	

5.2.12.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call GetTheHandler() method twice	The returned objects shall be the	
		same	
2	Verify that getTheHandler() method returns an EnvelopeHandler.getTheHandler()	The reference returned shall be an object implementing the EnvelopeHandler interface (check cast)	
3	Verify the returned value is not null	The reference returned shall not be null.	

5.2.13 Class EnvelopeResponseHandlerSystem

5.2.13.1 Method getTheHandler

Test Area Reference: Api_2_Ers_Gthd.

5.2.13.1.1 Conformance requirement

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

5.2.13.1.1.1 Normal execution

- CRRN1: The method shall return the single system instance of the class implementing the EnvelopeResponseHandler interface.
- CRRN2: The EnvelopeResponseHandler is a Temporary JCRE Entry Point Object (see Javacard 2.2.1 Runtime Environment (JCRE) Specification [2]).

5.2.13.1.1.1 Parameter errors

No requirements.

5.2.13.1.1.3 Context errors

- CRRC1: The method shall thrown ToolkitException.HANDLER_NOT_AVAILABLE if the handler is not available.
- CRRC2: After the first invocation of the ProactiveHandler.send method the EnvelopeResponseHandler is no more available.

5.2.13.1.2 Test area files

Test Source: Test_Api_2_Ers_Gthd.java.

Test Applet: Api_2_Ers_Gthd_1.java.

Cap File: api_2_ers_gthd.cap.

5.2.13.1.3 Test coverage

CRR number	Test case number	
N1	1, 2, 3	
N2	checked in CAT Runtime Environment: Cre_Api_Hepo (Test case 3 and 4)	
C1	checked in CAT Runtime Environment: Cre_Mha_Erhd (Test case 1)	
C2	4	

5.2.13.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call getTheHandler() twice	The returned objects shall be the	
		same	
2	Verify that getTheHandler returns an EnvelopeResponseHandler Call getTheHandler() method	The reference returned shall be an object implementing the EnvelopeResponseHandler interface (check cast)	
3	Verify the returned value is not null	The reference returned shall not be	
	Call getTheHandler() method	null.	

ld	Description	API Expectation	APDU Expectation
4	Send a proactive command, and then, Call	ToolkitException.HANDLER_NOT_	
	getTheHandler()	AVAILABLE is thrown	

5.2.14 Class ProactiveHandlerSystem

5.2.14.1 Method getTheHandler

Test Area Reference: Api_2_Phs_Gthd.

5.2.14.1.1 Conformance requirement

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

5.2.14.1.1.1 Normal execution

- CRRN1: The method shall return the single system instance of the class implementing the ProactiveHandler interface.
- CRRN2: The ProactiveHandler is a Temporary JCRE Entry Point Object (see Javacard 2.2.1 Runtime Environment (JCRE) Specification [2]).

5.2.14.1.1.2 Parameter errors

No requirements.

5.2.14.1.1.3 Context errors

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

5.2.14.1.2 Test area files

Test Source: Test_Api_2_Phs_Gthd.java.

Test Applet: Api_2_Phs_Gthd_1.java.

Cap File: api_2_phs_gthd.cap.

5.2.14.1.3 Test coverage

CRR number	Test case number	
N1	1, 2, 3	
N2	checked in CAT Runtime Environment: Cre_Api_Hepo (Test case 5 and 6)	
C1	checked in CAT Runtime Environment: Cre_Mha_Pahd (Test case 1)	

5.2.14.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call getTheHandler() method twice	The returned objects shall be the	
		same	
2	Call getTheHandler() method	The reference shall be an objetc	
		implementing the	
		ProactiveHandler interface	
3	Call getTheHandler() method	The reference shall not be null	

5.2.15 Class ProactiveResponseHandlerSystem

5.2.15.1 Method getTheHandler

Test Area Reference: Api_2_Prs_Gthd.

5.2.15.1.1 Conformance requirement

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

 $\label{eq:public_static} \mbox{ProactiveResponseHandler getTheHandler()} \\ \mbox{throws ToolkitException}$

5.2.15.1.1.1 Normal execution

- CRRN1: The method shall return the single system instance of the object implementing the ProactiveHandler interface.
- CRRN2: The ProactiveResponseHandler is a Temporary JCRE Entry Point Object (see Javacard 2.2.1 Runtime Environment (JCRE) Specification [2]).

5.2.15.1.1.2 Parameter errors

No requirements.

5.2.15.1.1.3 Context errors

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

5.2.13.1.2 Test area files

Test Source: Test_Api_2_Prs_Gthd.java.

Test Applet: Api_2_Prs_Gthd_1.java.

Cap File: api_2_prs_gthd.cap.

5.2.15.1.3 Test coverage

CRR number	Test case number
N1	1, 2, 3
N2	checked in CAT Runtime Environment: Cre_Api_Hepo (Test case 7 and 8)
C1	checked in CAT Runtime Environment: Cre_Mha_Prhd (Test case 1)

5.2.15.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Build and send a Proactive Command		Proactive Command
	Terminal Response		
	Call getTheHandler() twice method	The returned objects shall be the	
		same	
2	Call getTheHandler() method	The reference shall be an object implementing the ProactiveResponseHandler interface	
3	Call getTheHandler() method	The reference shall not be null	

5.2.16 Class TerminalProfile

5.2.16.1 Method check(byte index)

Test Area Reference: Api_2_Tep_Checb.

5.2.16.1.1 Conformance requirement

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

5.2.16.1.1.1 Normal execution

- CRRN1: The method checks a facility in the handset profile: returns true if supported and false otherwise.
- CRRN2: returns false if facility-index is outside Terminal Profile data.

5.2.16.1.1.2 Parameter errors

CRRP1: shall throw BAD_INPUT_PARAMETER ToolkitException if index has a negative value.

5.2.16.1.1.3 Context errors

 CRRC1: shall throw TERMINAL_PROFILE_NOT_AVAILABLE ToolkitException if Terminal Profile data are not available.

5.2.16.1.2 Test area files

Specific triggering: EVENT_STATUS_COMMAND:

Test Source: Test_Api_2_Tep_Checb.java.

Test Applet: Api_2_Tep_Checb_1.java.

Cap File: api_2_tep_checb.cap.

5.2.16.1.3 Test coverage

CRR number	Test case number
N1	2,3
N2	4
P1	5
C1	1

5.2.16.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	No Terminal Profile is registered		•
	1- Trigger applet with status command 2- Call check() method with Index = 1	1- applet is triggered 2- TERMINAL_PROFILE_NOT_AVAI LABLE ToolkitException is thrown	
2	Terminal Profile, Facility is supported		
	1- Trigger applet with EVENT_UNRECOGNIZED_ENVELOPE 2- Call check() method with index = 0	1- applet is triggered 2- returns true	

ld	Description	API Expectation	APDU Expectation
3	Facility is not supported		
	Call check() method with index = 15	returns false	
4	Facility index is outside TerminalProfile data		
	Call check() method with index = 0x7F	Returns false	
5	Index has a negative value		
	Call check() method with index = -1	Throws a ToolkitException with BAD_INPUT_PARAMETER reason code.	

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

Test Area Reference: Api_2_Tep_Chec_Bss.

5.2.16.2.1 Conformance requirement

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

5.2.16.2.1.1 Normal execution

- CRRN1: The method checks all the facilities corresponding to bits set to 1 in the mask buffer: returns true if the bitwise AND of the TerminalProfile data padded with 0 and the mask is equal to the mask, false otherwise.
- CRRN2: The method returns true if the length is equal to 0.

5.2.16.2.1.2 Parameter errors

- CRRP1: The method shall throw java.lang.NullPointerException if mask is null.
- CRRP2: The method shall throw java.lang.ArrayIndexOutOfBoundsException if check would cause access of data outside mask array bounds.
- CRRP3: If offset or length parameter is negative an ArrayIndexOutOfBoundsException exception is thrown and no check is performed.
- CRRP4: If offset+length is greater than mask.length, the length of the mask array an ArrayIndexOutOfBoundsException exception is thrown and no check is performed.

5.2.16.2.1.3 Context errors

• CRRC1: The method shall throw TERMINAL_PROFILE_NOT_AVAILABLE ToolkitException if Terminal Profile data are not available.

5.2.16.2.2 Test area files

Specific triggering: MENU_SELECTION:

Test Source: Test_Api_2_Tep_Chec_Bss.java.

Test Applet: Api_2_Tep_Chec_Bss_1.java.

Cap File: api_2_tep_chec_bss.cap.

5.2.16.2.3 Test coverage

CRR number	Test case number
N1	9, 10, 11
N2	8
P1	2
P2	3, 4, 5, 6
P3	4, 7
P4	6
C1	1

5.2.16.2.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	No Terminal Profile is registered		-
	Triggered by Menu Selection Call check() method: mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	TERMINAL_PROFILE_NOT_A VAILABLE ToolkitException is thrown	
2	NULL as parameter to check		
	Call check() method: mask= NULL	NullPointerException is thrown	
3	Offset > mask.length		
	Call check() method: mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	ArrayIndexOutOfBoundsExcep tion is thrown	
4	Offset < 0		
	Call check() method: mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	ArrayIndexOutOfBoundsExcep tion is thrown	
5	Length > mask.length		
	Call check() method: mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	ArrayIndexOutOfBoundsExcep tion is thrown	
6	Offset + length > mask.length		
	<pre>Call check() method: mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF</pre>	ArrayIndexOutOfBoundsExcep tion is thrown	
7	Length < 0		
	Call check() method: mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	ArrayIndexOutOfBoundsExcep tion is thrown	
8	length = 0		
	<pre>call check() method: mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF</pre>	Returns true	
9	Check all the Terminal Profile		
	Call check() method: mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	Returns false because facility 15 is not supported	
10	Check a part of the Terminal Profile		
	Call check() method: mask = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	Returns true: the 16 first facilities except facility 15 have been successfully checked	

ld	Description	API Expectation	APDU Expectation
11	Check a part of the Terminal Profile		
	Call check() method: mask = 0x0080 offset = 0 length = 2	Returns false: only facility 15 is checked and not supported.	

5.2.16.3 Method check(short index)

Test Area Reference: Api_2_Tep_Checs.

5.2.16.3.1 Conformance requirement

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

5.2.16.3.1.1 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 TerminalProfile data.
- CRRN2: returns false if facility-index is outside Terminal Profile data.

5.2.16.3.1.2 Parameter errors

• CRRP1: shall throw BAD_INPUT_PARAMETER ToolkitException if index has a negative value.

5.2.16.3.1.3 Context errors

• CRRC1: shall throw TERMINAL_PROFILE_NOT_AVAILABLE ToolkitException if Terminal Profile data are not available.

5.2.16.3.2 Test area files

Specific triggering: EVENT_STATUS_COMMAND.

Test Source: Test_Api_2_Tep_Checs.java.

Test Applet: Api_2_Tep_Checs_1.java.

Cap File: api_2_tep_checs.cap.

5.2.16.3.3 Test coverage

CRR number	Test case number
N1	2, 3, 4
N2	
P1	
C1	1

5.2.16.3.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	No Terminal Profile is registered		
	1- Triggerapplet with status command 2- Call check() method with index = 1	1- applet is triggered 2- TERMINAL_PROFILE_NOT_AVAI LABLE ToolkitException is thrown	
2	Terminal Profile, Facility is supported		
	<pre>1- Trigger applet with unrecognized envelope 2- Call check() method with index = 0</pre>	Returns true	
3	Facility is not supported		
	Call check() method with index = 15	Returns false	
4	Facility index is outside TerminalProfile data		
	Call check() method with index = 0x0099	Returns false	
5	Index has a negative value		
	Call check() method with index = -1	Throws a ToolkitException with BAD_INPUT_PARAMETER reason code.	

5.2.16.4 Method getValue(short indexMSB, short indexLSB)

Test Area Reference: Api_2_Tep_Gval.

5.2.16.4.1 Conformance requirement

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

5.2.16.4.1.1 Normal execution

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

5.2.16.4.1.2 Parameter errors

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

5.2.16.4.1.3 Context errors

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

5.2.16.4.2 Test area files

Specific triggering: EVENT_STATUS_COMMAND.

Test Source: Test_Api_2_Tep_Gval.java.

Test Applet: Api_2_Tep_Gval_1.java.

Cap File: api_2_tep_gval.cap.

5.2.16.4.3 Test coverage

CRR number	Test case number
N1	2,3
P1	4, 5, 6, 7
C1	1

5.2.16.4.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	No Terminal Profile is registered		
	Triggered by status command Call getValue() method: indexMSB = 15, indexLSB = 0	TERMINAL_PROFILE_NOT_AVAI LABLE ToolkitException is thrown	
2	Retrieve number of character down Terminal display in Terminal Profile which is 13		
	Call getValue() method: indexMSB = 108, indexLSB = 104	Returns 13	
3	Retrieve byte 3 and byte 4 from terminal profile.		
	Byte 3 = 0xD2, Byte 4 = 0xF0 Call getValue() method: indexMSB = 31, indexLSB = 16	Returns 0xF0D2	
4	indexMSB is negative		
	<pre>call getValue() method: indexMSB = 0xFFFF, indexLSB = 0xFFFD</pre>	BAD_INPUT_PARAMETER ToolkitException is thrown	
5	indexLSB is negative		
	Call getValue()method: indexMSB = 0x0002, indexLSB = 0xFFFD	BAD_INPUT_PARAMETER ToolkitException is thrown	
6	indexMSB < indexLSB	·	
	Call getValue() method: indexMSB = 0x0002, indexLSB = 0x0003	BAD_INPUT_PARAMETER ToolkitException is thrown	
7	indexMSB > indexLSB + 16		
	Call getValue() method: indexMSB = 0x0021, indexLSB = 0x0010	BAD_INPUT_PARAMETER ToolkitException is thrown	
8	indexMSB = indexLSB + 16		
	Call getValue() method: indexMSB = 0x0020, indexLSB = 0x0010	BAD_INPUT_PARAMETER ToolkitException is thrown	
9	indexMSB is outside data available		
	Call getValue() method: indexMSB = 121, indexLSB = 115	Returns 0x001F	

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

Test Area Reference: Api_2_Tep_Copy.

5.2.16.5.1 Conformance requirement

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

5.2.16.5.1.1 Normal execution

- CRRN1: The method copies a part of the handset profile in a buffer.
- CRRN2: The method returns dstOffset + dstLength.

5.2.16.5.1.2 Parameter errors

- CRRP1: if dstBuffer is null NullPointerException is thrown.
- CRRP2: 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.

5.2.16.5.1.3 Context errors

• CRRC1: The method shall throw TERMINAL_PROFILE_NOT_AVAILABLE ToolkitException if Terminal Profile data are not available.

5.2.16.5.2 Test area files

Specific triggering: EVENT_STATUS_COMMAND.

Test Source: Test_Api_2_Tep_Copy.java.

Test Applet: Api_2_Tep_Copy_1.java.

Cap File: api_2_tep_copy.cap.

5.2.16.5.3 Test coverage

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

5.2.16.5.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	No Terminal Profile is registered	711 Exposition	Al Do Expediation
1 '	No reminari rome is registered		
	Triggered by status command		
	Call copy() method:	TERMINAL_PROFILE_NOT_AVAI	
	startOffset = 0	LABLE ToolkitException is thrown	
	dstBuffer.length = 6	LA ABEL TOOMALEXOOPHOTTIC UTOWIT	
	dstOffset = 0 dstLength = 6		
2	dstBuffer is null	NullPointerException is thrown	
3	dstOffset ≥ dstBuffer.length	Null Fornier Exception is thrown	
3	dstoffset 2 dstbuffer.length		
	Call copy() method:	ArrayIndexOutOfBoundsException	
	startOffset = 0	is thrown	
	dstBuffer.length = 5	13 tillowii	
	dstOffset = 5		
<u> </u>	dstLength = 1		
4	dstOffset < 0		
	Call copy() method:	ArrayladayOutOfDayadaEyeantian	
	startOffset = 0	ArrayIndexOutOfBoundsException is thrown	
	dstBuffer.length = 5	IS UITOWIT	
	dstOffset = -1		
_	dstLength = 1		
5	dstLength < 0		
	Call copy() method:	A manufactor of Davis da Evacantia a	
	startOffset = 0	ArrayIndexOutOfBoundsException is thrown	
	dstBuffer.length = 5	is thrown	
	dstOffset = 1		
	dstLength = -1		
6	dstLength >dstBuffer.length		
	Call copy() method:	A 1 1 0 10'D 1 5 1'	
	startOffset = 0	ArrayIndexOutOfBoundsException	
	dstBuffer.length = 5	is thrown	
	dstOffset = 0		
	dstLength = 6		
7	dstOffset + dstLength >dstBuffer.length		
	Call copy() method:	A 1 1 0 10'D 1 5 1'	
	startOffset = 0	ArrayIndexOutOfBoundsException is thrown	
	dstBuffer.length = 5	is thrown	
	dstOffset = 3		
	dstLength = 3		
8	Successful call extreme values		
	Call copy() method:	Deput of conv() is C	
	startOffset = 0	Result of copy() is 6	
	dstBuffer.length = 6		
	dstOffset = 0		
	dstLength = 6		
9	Successful call any values		
	Call copy() method:	Popult of conv() is 7	
	startOffset = 1	Result of copy() is 7	
	dstBuffer.length = 20		
	dstOffset = 3		
4.0	dstLength = 4		
10	Successful call, copy with length =0		
	Call copy() method:	Popult of conv() is 20	
	startOffset = 0	Result of copy() is 20	
	dstBuffer.length = 20		
	dstOffset = 20		
44	dstLength = 0		
11	Value outside ProfileDownload data available		
	Call copy() method:	Deput of conv() is C	
	startOffset = 13	Result of copy() is 6	
	dstBuffer.length = 6		
	dstOffset = 0		
	dstLength = 6		

5.2.17 Class ToolkitRegistrySystem

5.2.17.1 Method getEntry

Test Area Reference: Api_2_Trs_Gety.

5.2.17.1.1 Conformance requirement:

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

5.2.17.1.1.1 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.

5.2.17.1.1.2 Parameter errors

No requirements.

5.2.17.1.1.3 Context errors

- CRRC1: This method returns null if the Applet.register() has not yet been invoked.
- CRRC2: This method returns null if the server does not exist.
- CRRC3: This method returns null if the server returns null.
- CRRC4: ToolkitException with REGISTRY_ERROR reason code shall be thrown in any case of register error.

5.2.17.1.2 Test area files

Test Source: Test_Api_2_Trs_Gety.java.

Test Applet: Api_2_Trs_Gety_1.java.

Cap File: api_2_trs_gety.cap.

5.2.17.1.3 Test coverage

CRR number	Test case number	
N1	2	
N2	3	
C1	1	
C2	Not testable	
C3	Not testable	
C4	Not testable	

5.2.17.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call before register() method		
	In the constructor, the applet instance calls the getEntry() method.	Returns null	
2	Call after register() method		
	In the install method and after the call to register() method, call the getEntry() method.	A not null reference is returned. No exception shall be thrown	
3	Check it returns the same entry The applet calls the getEntry() method again, in the processToolkit() method.	Returns the same ToolkitRegistry object reference as for test case 2.	

5.2.18 Class ToolkitException

5.2.18.1 ToolkitException Constructor

Test Area Reference: Api_2_Tke_Coor.

5.2.18.1.1 Conformance requirement:

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

public ToolkitException(short reason)

5.2.18.1.1.1 Normal execution

• CRRN1: Construct a ToolkitException instance with the specified reason.

5.2.18.1.1.2 Parameter errors

No requirements.

5.2.18.1.1.3 Context errors

No requirements.

5.2.18.1.2 Test area files

Test Source: Test_Api_2_Tke_Coor.java.

Test Applet: Api_2_Tke_Coor_1.java.

Cap File: api_2_tke_coor.cap.

5.2.18.1.3 Test coverage

CRR number	Test case number
N1	1

5.2.18.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	reason = (short) 19	ToolkitException.getReason() =	
		(short)19	

5.2.18.2 Method throwlt

Test Area Reference: Api_2_Tke_Thit.

5.2.18.2.1 Conformance requirement

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

 $\begin{array}{ccc} {\tt public} \ {\tt static} \ {\tt void} \ {\tt throwIt(short} \ {\tt reason)} \\ & {\tt throws} \ {\tt ToolkitException} \end{array}$

5.2.18.2.1.1 Normal execution

• CRRN1: Throws the JCRE instance of the ToolkitException class with the specified reason.

• CRRN2: extends javacard.framework.CardRuntimeException.

5.2.18.2.1.2 Parameter errors

No requirements.

5.2.18.2.1.3 Context errors

No requirements.

5.2.18.2.2 Test area files

Test Source: Test_Api_2_Tke_Thit.java.

Test Applet: Api_2_Tke_Thit_1.java.

Cap File: api_2_tke_thit.cap.

5.2.18.2.3 Test coverage

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

5.2.18.2.4 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 = 0xA55A	
	with the specified reason		
4	ToolkitException extends	Reason = 0	
	javacard.framework.CardRuntimeException		
5	ToolkitException extends	Reason = 1	
	javacard.framework.CardRuntimeException		
6	ToolkitException extends	Reason = 0xA55A	
	javacard.framework.CardRuntimeException		

5.2.18.3 Reason Codes

Test Area Reference: Api_1_Tke_Cons.

5.2.18.3.1 Conformance Requirement

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

5.2.18.3.1.1 Normal execution

- CRRN1: The Constants of the class ToolkitException shall all have the same name and value defined in the ETSI TS 102 241 [9].
- CRRN2: Constructs ToolkitException an Exception with the specified reason.

5.2.18.3.1.2 Parameter errors

No requirements.

5.2.18.3.1.3 Context errors

No requirements.

5.2.18.3.2 Test area files

None.

5.2.18.3.3 Test Coverage

CRR number	Test case number	
N1 & N2	The constants in Java are resolved at compilation time, therefore a runtime test is not	
	useful. No test of constants will be performed	

5.2.18.3.4 Test Procedure

None.

5.3 Package uicc.access.fileadministration

5.3.1 Interface AdminFileView

5.3.1.1 Method createFile(ViewHandler viewHandler)

Test Area Reference: Api_4_Afv_Crtf.

5.3.1.1.1 Conformance requirement

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

5.3.1.1.1.1 Normal execution

• CRRN1: This method creates a new file under the current DF or ADF, as described in ETSI TS 102 222 [7].

5.3.1.1.2 Parameter errors

- CRRP1: If viewHandler is null, an instance of java.lang.NullPointerException shall be thrown.
- CRRP2: If the viewHandler parameter includes incorrect parameters, an instance of AdminException shall be thrown. The reason code shall be AdminException.INCORRECT_PARAMETERS.

5.3.1.1.3 Context errors

- CRRC1: If the method call causes a memory problem (e.g. memory access error), an instance of UICCException shall be thrown. The reason code shall be UICCException.MEMORY_PROBLEM.
- CRRC2: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.
- CRRC3: If the file identifier of the EF being created already exists, an instance of AdminException shall be thrown. The reason code shall be AdminException.FILE_ALREADY_EXISTS.
- CRRC4: If the DF name already exists, an instance of AdminException shall be thrown. The reason code shall be AdminException.DF_NAME_ALREADY_EXISTS.
- CRRC5: If there is not enough memory, an instance of AdminException shall be thrown. The reason code shall be AdminException.NOT_ENOUGH_MEMORY_SPACE.
- CRRC6: If the access conditions are not satisfied, an instance of UICCException shall be thrown. The reason code shall be UICCException.SECURITY_STATUS_NOT_SATISFIED.

5.3.1.1.2 Test area files

Test Source: Test_Api_4_Afv_ Crtf.java.

Test Applet: Api_4_Afv_ Crtf _1.java.

Cap File: api_4_Afv_ Crtf.cap.

5.3.1.1.3 Test coverage

CRR number	Test case number
N1	1, 2
P1	3
P2	4
C1	Not testable
C2	Not testable
C3	5
C4	6
C5	Not testable
C6	7

5.3.1.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Create an EF	-	-
	1- applet is triggered by sending an unrecognized envelope 2- get an AdminFileView AdminFileViewBuilder.getTheUICCAdminFileView(CLEAR_ON_RESET) 3- select MF/DF _{TEST} 4- create transparent EF _{PETTO} (6F29)	4- no exception shall be thrown	
	10- select MF/DF _{TEST} /EF _{RFU0} , read binary 11- select MF/DF _{TEST} /EF _{RFU1} , read record 1 12- select MF/DF _{TEST} /EF _{RFU2} , read record 1		10- returns: 12 34 56 11- returns: 02 12- returns: 12 34 56
2	Create a DF in ADF1 1- applet is triggered by sending an unrecognized envelope 2- get an AdminFileView AdminFileViewBuilder.getTheAdminFileView(AID_ADF1,CLEAR_ON_RESET) 3- select ADF1/DFTEST 4- create DFRFUI (5F01) 5- select DFRFUI (6F2A) 7- select EFRFUI (6F2A) 7- select EFRFUI (6F2A) 8- select ADF1/DFTEST/EFRFUI (6F2A), read		8- returns: 12 34 56
	binary 9- Reset		0- Teturns. 12 34 30
3	Call createFile with a null viewHandler		
	1- call createFile() with null.	1- java.lang.NullPointerException shall be thrown	
4	Call createFile with incorrect parameters		
	1- call createFile with incorrect parameters.	1- AdminException.INCORRECT_PARAME TERS shall be thrown	
5	EF already exists		
	1- Select MF/DF _{TEST} 2- Call createFile(EF _{TARU})	2- AdminException.FILE_ALREADY_EXIST S	

ld	Description	API Expectation	APDU Expectation
6	DF already exists		
	1- Call createFile(DF _{TEST)}	1-	
		AdminException.DF_NAME_ALREADY_ EXISTS	
7	Security status not satisfied		
	1- Select MF/DF _{TEST} /DF _{ARR2} 2- Call createFile() to create some transparent file.	2- UICCException.SECURITY_STATUS_N OT_SATISFIED	

5.3.1.2 Method deleteFile(short fid)

Test Area Reference: Api_4_Afv_Dltf.

5.3.1.2.1 Conformance requirement

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

5.3.1.2.1.1 Normal execution

• CRRN1: This method initiates the deletion of an EF immediately under the current DF, or a DF with its complete subtree, as described in ETSI TS 102 222 [7].

5.3.1.2.1.2 Parameter errors

Not applicable

5.3.1.2.1.3 Context errors

- CRRC1: If the method call causes a memory problem (e.g. memory access error), an instance of UICCException shall be thrown. The reason code shall be UICCException.MEMORY_PROBLEM.
- CRRC2: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.
- CRRC3: If the file cannot be found in the current directory, an instance of UICCException. shall be thrown. The reason code shall be UICCException. FILE_NOT_FOUND.
- CRRC4: If the access conditions are not satisfied, an instance of UICCException shall be thrown. The reason code shall be UICCException.SECURITY_STATUS_NOT_SATISFIED.
- CRRC5: If the operation would cause the commit capacity to be exceeded, an instance of javacard.framework.TransactionException shall be thrown.

5.3.1.2.2 Test area files

Test Source: Test_Api_4_Afv_ Dltf.java.

Test Applet: Api_4_Afv_ Dltf _1.java.

Cap File: api_4_Afv_ Dltf.cap.

5.3.1.2.3 Test coverage

CRR number	Test case number
N1	1, 2, 3, 4
C1	Not testable
C2	Not testable
C3	5
C4	6
C5	Not testable

5.3.1.2.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Initialization	•	•
	1- applet is triggered by sending an		
	unrecognized envelope		
	2- get an AdminFileView AdminFileViewBuilder.getTheUICCAdminFileVi		
	ew(CLEAR ON RESET)		
	3- select MF/DF _{TEST}		
	4- create DF _{RFU1}		
	5- select DF _{RFU1}		
	6- create DF_{RFU2} , create $\text{EF}_{\text{RFU1}},$ create EF_{RFU2}		
	7- select DF _{RFU2}		
	8- create EF _{RFU1}		
	9- get an AdminFileView		
	AdminFileViewBuilder.getTheAdminFileView(A		
	ID_ADF1,CLEAR_ON_RESET)		
	10- select MF/DF _{TEST}		
	11- create DF _{RFU1}		
	12- select DF _{RFU1}		
	13- create DF_{RFU2} , create EF_{RFU1} , create EF_{RFU2}		
	14- select DF _{RFU2}		
	15- create EF _{RFU1}		
1	Delete EF		
	1- Select MF/DF _{TEST} /DF _{RFU1}		
	2- call deleteFile(EF _{RFU1}) 3- Select MF/DF _{TEST} /DF _{RFU1} /EF _{RFU1}	2- no exception shall be thrown	
_		3- UICCException.FILE_NOT_FOUND is thrown	
2	Delete EF in ADF1		
	1- Select ADF1/DF _{TEST} /DF _{RFU1}		
	2- call deleteFile(EF _{RFU1})	2- no exception shall be thrown	
	3- Select ADF1/DF _{TEST} /DF _{RFU1} /EF _{RFU1}	3- UICCException.FILE_NOT_FOUND is thrown	
3	Delete DF and its subtree		
	1- Select MF/DF _{TEST}		
	2- call deleteFile(DF _{RFU1}) 3- Select MF/DF _{TEST} /DF _{RFU1}	2- no exception shall be thrown	
4		3- UICCException.FILE_NOT_FOUND is thrown	
4	Delete DF and its subtree in ADF1		
	1- Select ADF1/DFTEST		
	2- call deleteFile(DF _{RFU1})	2- no exception shall be thrown	
	3- Select ADF1/DF _{TEST} /DF _{RFU1}	3- UICCException.FILE NOT FOUND is thrown	
5	File not found		
	1- Select MF/DF _{TEST}	O LUCOFINATION FUE NOT FOLIND	
	2- call deleteFile(DF _{RFU1})	2- UICCException.FILE_NOT_FOUND	
	3- Select ADF1/DF _{TEST}		
	4- call deleteFile(EF _{RFU1})	4- UICCException.FILE_NOT_FOUND	
6	Security status not satisfied		
	1- Select MF/DFTEST/DFARR2		
	2- call deleteFile(EF _{TAR2T})	2-	
		UICCException.SECURITY_STATUS_NOT_SA	
		TISFIED	

5.3.1.3 Method resizeFile(ViewHandler viewHandler)

Test Area Reference: Api_4_Afv_Rszf.

5.3.1.3.1 Conformance requirement

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

5.3.1.3.1.1 Normal execution

• CRRN1: This method resizes a file under the current DF or ADF, as described in ETSI TS 102 222 [7].

5.3.1.3.1.2 Parameter errors

- CRRP1: If viewHandler is null, an instance of java.lang.NullPointerException shall be thrown.
- CRRP2: If the viewHandler parameter includes incorrect parameters, an instance of AdminException shall be thrown. The reason code shall be AdminException.INCORRECT_PARAMETERS.

5.3.1.3.1.3 Context errors

- CRRC1: If the method call causes a memory problem (e.g. memory access error), an instance of UICCException shall be thrown. The reason code shall be UICCException.MEMORY_PROBLEM.
- CRRC2: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.
- CRRC3: If the file cannot be found in the current directory, an instance of UICCException. shall be thrown. The reason code shall be UICCException. FILE NOT FOUND.
- CRRC4: If the access conditions are not satisfied, an instance of UICCException shall be thrown. The reason code shall be UICCException.SECURITY_STATUS_NOT_SATISFIED.
- CRRC5: If the operation would cause the commit capacity to be exceeded, an instance of javacard.framework.TransactionException shall be thrown.
- CRRC6: If there is not enough memory, an instance of AdminException shall be thrown. The reason code shall be AdminException.NOT_ENOUGH_MEMORY_SPACE.
- CRRC7: If the conditions of use are not satisfied, an instance of AdminException shall be thrown. The reason code shall be AdminException.CONDITIONS_OF_USE_NOT_SATISFIED.
- CRRC8: If the method resizeFile() is applied to a non compatible file, an instance of UICCException shall be thrown. The reason code shall be UICCException.COMMAND_INCOMPATIBLE.
- CRRC9: If the method resizeFile() is applied to invalidated data, an instance of UICCException shall be thrown. The reason code shall be UICCException.REF_DATA_INVALIDATED.

5.3.1.3.2 Test area files

Test Source: Test_Api_4_Afv_ Rszf.java.

Test Applet: Api_4_Afv_ Rszf _1.java.

Cap File: api_4_Afv_ Rszf.cap.

5.3.1.3.3 Test coverage

CRR number	Test case number
N1	1, 2
P1	3
P2	4
C1	Not testable
C2	Not testable
C3	5
C4	6
C5	Not testable
C6	Not testable
C7	Not testable
C8	7
C9	8

5.3.1.3.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Resize a Transparent EF	•	•
	1- Trigger the applet with an unrecognized envelope		
	2- Select MF/DF _{TEST}		
	3- Call ResizeFile() on EF _{TARU}		
	new size: 10 bytes		
	Applet finalizes		
	Apprec linalizes		4- should return a size
	4- Select MF/DF $_{\rm TEST}$ /EF $_{\rm TARU}$ and check size in		of 10 bytes
	the returned FCP template.		
2	5- Restore EF _{TARU} Resize a Linear Fixed EF		
-	Resize a Linear Fixed Li		
	1- Trigger the applet with an unrecognized		
	envelope		
	2- Select MF/DF _{TEST} 3- Call ResizeFile() on EFLARU		
	add 2 records.		
	Applet finalizes		4- should return a size
	4 - Select MF/DF _{TEST} /EF _{LARU} and check size in		of 16 bytes
	the returned FCP template.		
	5- Restore EF _{LARU}		
3	Call resizeFile with a null viewHandler		
	1- Call resizeFile with null.	1- java.lang.NullPointerException shall be	
		thrown	
4	Call createFile with incorrect parameters		
	1- Call createFile with incorrect	1-	
	parameters.	AdminExceptiogn.INCORRECT_PARAMETERS	
<u> </u>	F11	shall be thrown	
5	File not found		
	1- Select MF/DF _{TEST}		
	2- Call resizeFile(DF _{RFU1})	2- UICCException.FILE_NOT_FOUND shall be	
	2 Cologt ADE1/DE	thrown	
	3- Select ADF1/DF _{TEST} 4- Call resizeFile(EF _{RFU1})	4- UICCException.FILE_NOT_FOUND shall be	
	Kro17	thrown	
6	Security status not satisfied		
	1 Cologt ME/DETECT/DEADD2		
	1- Select MF/DFTEST/DFARR2 2- Call resizeFile(EF _{TAR2T})	2-	
	TARZT/	UICCException.SECURITY_STATUS_NOT_SA	
		TISFIED shall be thrown	

ld	Description	API Expectation	APDU Expectation
7	Command incompatible		
	1- Select MF/DF _{TEST} , call resizeFile(EF _{CARU})	1- UICCException.COMMAND_INCOMPATIBLE shall be thrown	
8	Invalidated data		
	1- Select MF/DF _{TEST} 2- Invalidate EF _{TARU} 3- Call resizeFile(EF _{TARU}) 4- Validate EF _{TARU}	3- UICCException.REF_DATA_INVALIDATED shall be thrown.	

5.3.1.4 Method select (byte sfi)

Test Area Reference: Api_4_Afv_Slctb.

5.3.1.4.1 Conformance requirement

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

5.3.1.4.1.1 Normal execution

- CRRN1: Selects a file by its Short File Identifier in the current directory of the FileView.
- CRRN2: Allows to update the current file without handling the Select Response.
- CRRN3: The current EF it self can be selected.
- CRRN4: The file context associated with the FileView object is changed after successful execution.

5.3.1.4.1.2 Parameter errors

• CRRP1: If the file which sfi matches is not in the current directory or no file matches the sfi, an instance of UICCException shall be thrown. The reason code shall be UICCException.FILE NOT FOUND.

5.3.1.4.1.3 Context errors

- CRRC1: If the method call causes a memory problem (e.g. memory access error), an instance of UICCException shall be thrown. The reason code shall be UICCException.MEMORY_PROBLEM
- CRRC2: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.3.1.4.2 Test area files

Test Source: Test_Api_4_Afv_ Slctb.java.

Test Applet: Api_4_Afv_ Slctb _1.java.

Cap File: api_4_Afv_ slctb.cap.

5.3.1.4.3 Test coverage

CRR number	Test case number
N1	1, 2, 4
N2	Not testable
N3	3
N4	5
P1	4
C1	Not testable
C2	Not testable

5.3.1.4.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Selection possibilities, UICC file system		·
	1- get an AdminFileView		
	AdminFileViewBuilder.getTheUICCAdminFil		
	eView(CLEAR_ON_RESET) 2- select DFTEST, fid=1111	2- no exception shall be thrown	
	3- select With sfi EF _{TNR} , sfi=0x01	3- no exception shall be thrown	
	4- select with sfi EF_{TNII} , $sfi=0x02$	4- no exception shall be thrown	
	5- select with sfi EF _{CNU} , sfi=0x05	5- no exception shall be thrown	
2	Selection possibilities, ADF1		
	1- get an AdminFileView		
	AdminFileViewBuilder.getTheAdminFileVie		
	w(AID_ADF1,CLEAR_ON_RESET)	2- no exception shall be thrown	
	2- select DF _{TEST} , fid=1111 3- select with sfi EF _{TNR} , sfi=0x01	3- no exception shall be thrown	
	4- select with sfi EF _{TNI} , sfi=0x01	4- no exception shall be thrown	
	5- select with sfi EF _{CNU} , sfi=0x05	5- no exception shall be thrown	
	Serece with SII Bit mon SII-0805		
3	Current EF itself can be selected		
	1- get an AdminFileView		
	AdminFileViewBuilder.getTheUICCAdminFil		
	eView(CLEAR_ON_RESET)		
	2- select DF _{TEST} , fid=1111 3- select with sfi EF _{TNR} , sfi=0x01		
	4- select with sfi EF _{TNR} , sfi=0x01	4- no exception shall be thrown	
4	FILE NOT FOUND	·	
'	1- try to select a file with sfi=0x55	1- shall throw an	
		uicc.access.UICCException with	
		reason code FILE_NOT_FOUND	
5	File context changed	TOUSEN SOUCH IEE_IVOT_I COND	
	1- select EF _{TARII} , sfi=0x03	1- file content should be	
	read 3 first bytes	{0xFF,0xFF,0xFF}	
	2- select EF _{TNU} , sfi=0x02	2- file content should be	
	read file content		
		{0x55,0x55,0x55}	

5.3.1.5 Method select(short fid, byte[] fcp, short fcpOffset, short fcpLength)

Test Area Reference: Api_4_Afv_Slctb_bss.

5.3.1.5.1 Conformance requirement

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

5.3.1.5.1.1 Normal execution

- CRRN1: Selects a file of the UICC file system or of an ADF file system as defined in ETSI TS 102 221 [5].
- CRRN2: The method returns the FCP information in a form of a TLV structure as specified in ETSI TS 102 221 [5].
- CRRN3: If the fcpLength is greater than the length of the response, the whole response is copied into the fcp buffer and the length of the response is returned by the method.
- CRRN4: If the fcpLength is smaller than the length of the response, the first part of the response is copied into the fcp buffer and the fcpLength is returned by the method.
- CRRN5: After selecting a ADF/MF/DF no EF is selected.
- CRRN6: After selecting a linear fixed EF no record is selected.
- CRRN7: After selecting a cyclic EF the last updated record is the first record.
- CRRN8: Any file can be selected by FID which is an immediate child of the current directory.
- CRRN9: Any DF can be selected by FID which is an immediate child of the parent of the current DF.
- CRRN10: The parent of the current directory can be selected by the FID.
- CRRN11: The ADF of the current active application can be selected by the FID.
- CRRN12: The ADF/MF can always be selected.
- CRRN13: The file context associated with the FileView object is changed after successful execution.
- CRRN14: The current file context of any other applets shall not be changed. This will be tested during the
 testing of the framework.

5.3.1.5.1.2 Parameter errors

- CRRP1: If the array fcp is null, an instance of NullPointerException shall be thrown.
- CRRP2: If fcpOffset is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP3: If fcpLength is less than 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP4: If fcpOffset plus fcpLength is greater than the length of the array fcp.length an instance of ArrayIndexOutOfBoundsException shall be thrown.

5.3.1.5.1.3 Context errors

- CRRC1: If the file with a File-ID which matches fid could not be found according to the selection rules, an instance of UICCException shall be thrown. The reason code shall be UICCException.FILE_NOT_FOUND.
- CRRC2: If the method call causes a memory problem (e.g. memory access error), an instance of UICCException shall be thrown. The reason code shall be UICCException.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 UICCException.INTERNAL_ERROR.

5.3.1.5.2 Test area files

Test Source: Test_Api_4_Afv_Slctb_bss.java.

Test Applet: Api_4_Afv_Slctb_bss_1.java.

Cap File: Api_4_Afv_slctb_bss.cap.

5.3.1.5.3 Test coverage

CRR number	Test case number
N1	1, 2, 3, 4, 5, 6, 7, 8, 14, 18, 20, 21
N2	1, 2, 3, 4, 5, 6, 7, 8, 14, 18, 20, 21
N3	1
N4	2, 3, 4 ,5, 6, 7, 8
N5	15,19
N6	17
N7	18
N8	14
N9	14
N10	14
N11	19, 20
N12	20
N13	20
N14	1, 2, 3, 4, 5, 6, 7, 8, 14, 18, 20
P1	9
P2	10
P3	11
P4	12, 13
C1	16
C2	Not testable
C3	Not testable

5.3.1.5.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get an AdminFileView object, UICC file		
	system		
	get an AdminFileView		
	${\tt FileView.getTheUICCAdminFileView(CLEAR_O}$		
	N_RESET)		
1	Select EFTARU in MF (Transparent EF)	Shall return at least 19.	
	Select DF _{TEST}	fcp[] shall contain following TLVs:	
	select EF _{TARU} ,	1. 82 02 41 21 //file descriptor	
	fid=6F03	2. 83 02 2F E2 //file id	
	<pre>byte[] fcp = new byte[132] fcpOffset = 0</pre>	3. 8A 01 05 //life cycle status	
	fcpLength = 127	4. 80 02 00 0A // file size	
2	Select EFTARU in MF (Transparent EF)		
_	select EFTARU,	Shall return 7.	
	fid=6F03		
	fcpOffset = 0	fcp[] shall contain the first 7 bytes of	
	fcpLength = 7	the FCP structure and contain	
	select()	following TLV.	
		1. 82 02 41 21 //file descriptor	
3	Select DFTEST in MF		
	fid = DF _{TEST} , fid=1111	Shall return at least 17.	
	<pre>fcpOffset = 0 fcpLength = 127</pre>	fcp[] shall contain following TLVs	
	select()	1. 82 02 78 21 //file descriptor	
	Beleec ()	2. 83 02 11 11 //file id	
		3. 8A 01 05 //life cycle status	
4	Select EFCARU in DFTEST (Cyclic EF)	Shall return: 11	
	select EF _{CARU} ,	fcp[] shall contain following TLV:	
	fid=6f09	82 05 46 21 00 03 02	
	fcpOffset = 0		
	fcpLength = 11		
_	select() Select ADF1		
5	select ADF	Shall return: at least 27	
	fid=7FFF		
	fcp[0:5]=0x00	The first 5 bytes of fcp[] shall be 0x00	
	fcpOffset=5	and contains following TLVs:	
	fcpLength=127	1. 82 02 78 21 //file descriptor	
	select	2. 84 10 A0 00 00 00 09 00 05 FF FF	
		FF FF 89 60 00 00 00 //DF Name	
		3. 8A 01 05 //life cycle	

ld	Description	API Expectation	APDU Expectation
6	Select MF		
~	select MF,	Shall return: 11	
	fid= 3F00	fcp[] shall contain following TLVs:	
	fcpOffset = 0	1. 82 02 38/78 21 //file descriptor	
	fcpLength = 11	2. 83 02 3F 00 //file ID	
	select()		
7	Select DFTELECOM in MF		
	select DF _{TELECOM} ,	Shall return 13.	
	fid=7F10 fcp[0] = fcp[1] = 0x05	The first 2 bytes of fcp[] shall be 0x05	
	fcpOffset = 2	and fcp[] shall contain following TLVs	
	fcpLength = 13	1. 82 02 38/78 21 //file descriptor	
	select()	2. 83 02 7F 10 //file id	
8	Select EFLARU in DFTELECOM (Linear		
	FixedEF)	Shall return 14.	
	select EF _{LARU} , fid = 6F0C	fcp[] shall contain following TLVs:	
	fcpOffset = 0	1. 82 05 42 21 00 04 02	
	fcpLength = 14	2. 83 02 6F 0C	
9	fcp is null		
	select EF _{LARU} , fid = 6F0C	Shall throw	
	byte[] nullBuffer = null	java.lang.NullPointerException	
	fcpOffset = 0		
	fcpLength = 15		
10	fcpOffset < 0		
	select EF _{LARU} , fid = 6F0C	Shall throw	
	fcpOffset = -1	java.lang.ArrayIndexOutOfBoundsExce	
	fcpLength = 15	ption	
11	fcpLength < 0		
	select EF _{LARU} ,	Shall throw	
	<pre>fid = 6F0C fcpOffset = 0</pre>	java.lang.ArrayIndexOutOfBoundsExce	
	fcpLength = -1	ption	
12	fcpOffset + fcpLength > fcp.length		
	select EF _{LARU} ,	Shall throw	
	fid = 6F0C	java.lang.ArrayIndexOutOfBoundsExce	
	<pre>fcpOffset = 115 fcpLength = 18</pre>	ption	
13	fcpOffset + fcpLength > fcp.length		
	select EF _{LARU} ,	Shall throw	
	fid = 6F0C	java.lang.ArrayIndexOutOfBoundsExce	
	fcpOffset = fcp.length+1	ption	
	fcpLength = 0		
14	Selection possibilities		
' '	0- select MF, fid=3F00	No exception shall be thrown.	
	1- select EF _{UICC} , fid=2FF0		
	2- select DF _{TEST} , fid=1111		
	3- select EF_{CNU} , fid=6F05 4- select EF_{TABA} , fid=6F16		
	5- select DF _{SUB TEST} , fid=2211		
	6- select DF _{TEST} , fid=1111		
	7- select EF _{TAAA} , fid=6F16		
	8- select DF _{TEST} , fid=1111 9- select MF, fid=3F00		
	10- select DF _{TRST} , fid=1111		
	11- select EF _{TAAA} , fid=6F16		
	12- select MF, fid=3F00		
15	EF not selected after MF/DF selection		
	1- select MF, fid = 3F00		
	select EF _{ICCID} ,	2 - Shall throw	
	fid = 2FE2		
	2 - select MF	uicc.access.UICCException with reason code NO_EF_SELECTED.	
	fid = 3F00	Cason code NO_LI _SELECTED.	
	<pre>select() readBinary()</pre>		

ld	Description	API Expectation	APDU Expectation
16	No selection of non-reachable file	Al I Expediation	AI DO EXPECIATION
'	1 - select MF,		
	fid = 3F00	2 - Shall throw	
	2 - select EF _{CARU} ,	uicc.access.UICCException with	
	fid= 0x6F09	reason code FILE_NOT_FOUND.	
17	No record is selected after selecting linear		
1	fixed EF		
	1- select MF,		
	fid = 3F00		
	2- select DF _{TEST} , fid=1111		
	3- select EF _{LARU} ,		
	fid=6F0C		
	4 - recNumber = 0		
	<pre>mode = REC_ACC_MODE_ CURRENT readRecord()</pre>	4 - Shall throw uicc.access.UICC	
	readRecord()	Exception with reason code RECORD_NOT_FOUND.	
18	Record pointer in selected cyclic EF	RECORD_NOT_FOUND.	
_	1- select MF,		
	fid = 3F00		
	2- select DF _{TEST} ,		
	fid=1111 3- select EF _{CARU} ,		
	fid=6F09		
	4- byte[] data1 = { 1,2,3 }		
	mode = REC_ACC_MODE_PREVIOUS		
	updateRecord(data1) 5- select EF _{CARU}		
	fid = 6F09		
	select()		
	mode = REC_ACC_MODE_PREVIOUS	5 - The contents of data1 and data2	
	readRecord()	shall be identical.	
	readRecord(data2) compare data1 to data2	Silali be idertical.	
	6- restore original data of EF _{CARU}		
19	EF not selected after ADF/DF selection		
	1- get an AdminFileView		
	AdminFileViewBuilder.getTheAdminFileView (AID ADF1,CLEAR ON RESET)		
	2- select ADF,	2 Chall throw	
	fid = 7FFF	3 - Shall throw	
	select EF _{UICC} ,	uicc.access.UICCException with reason code NO_EF_SELECTED.	
	fid = 2FF0 3 - select ADF	COUNTY C	
	fid = 7FFF		
	select()		
20	readBinary()		
20	Reselection 1- Using the ADF FileView		
	select ADF, fid=7FFF	No exceptions shall be thrown	
	select ADF, fid=7FFF	The exceptions shall be tillown	
	2- Using the UICC FileView		
	select MF, fid=3F00 select MF, fid=3F00		
	3- select DF _{TEST} , fid=1111		
	select DF_{TEST} , fid=1111		
	5- select EF _{TAAA} , fid=6F16		
21	select EF _{TAAA} , fid=6F16 Security attributes		
- 1	Security attributes		
	1- Using the ADF FileView	1- fcp[] shall contain the following TLV	
	select ADF, fid=7FFF	8B 03 AC 00 01 or	
	select DF _{TEST} , fid=1111	8B 06 AC 00 00 01 01 01	
	select EF _{LARR1} , fid=6FA1 2- Using the UICC FileView	2- fcp[] shall contain the following TLV	
	select MF, fid=3F00	8B 03 AC 00 03 or	
	select DF _{TEST} , fid=1111	8B 06 AC 00 00 03 01 03	
	select EF _{TARR3} , fid=6FB3		

5.3.1.6 Method select (short fid)

Test Area Reference: Api_4_Afv_Slcts.

5.3.1.6.1 Conformance requirement

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

5.3.1.6.1.1 Normal execution

- CRRN1: Selects a file of the UICC file system or of an ADF file system by file identifier.
- CRRN2: Allows to update the current file without handling the Select Response.
- CRRN3: After selecting a ADF/MF/DF no EF is selected.
- CRRN4: After selecting a linear fixed EF no record is selected.
- CRRN5: Any file can be selected by FID which is an immediate child of the current directory.
- CRRN6: Any DF can be selected by FID which is an immediate child of the parent of the current DF.
- CRRN7: The parent of the current directory can be selected by the FID.
- CRRN8: The ADF of the current active application can be selected by the FID.
- CRRN9: The ADF/MF/EF can always be self selected.
- CRRN10: The file context associated with the FileView object is changed after successful execution.

5.3.1.6.1.2 Parameter errors

No requirements.

5.3.1.6.1.3 Context errors

- CRRC1: If the file with a File Identifier which matches fid could not be found according to the selection rule
 listed in CCRN3, an instance of UICCException shall be thrown. The reason code shall be
 UICCException.FILE_NOT_FOUND.
- CRRC2: If the file with a File Identifier which matches fid could not be found according to the selection rule listed in CCRN4, an instance of UICCException shall be thrown. The reason code shall be UICCException.FILE NOT FOUND.
- CRRC3: If the file with a File Identifier which matches fid could not be found according to the selection rule listed in CCRN5, an instance of UICCException shall be thrown. The reason code shall be UICCException.FILE_NOT_FOUND.
- CRRC4: If the file with a File Identifier which matches fid could not be found according to the selection rule listed in CCRN6, an instance of UICCException shall be thrown. The reason code shall be UICCException.FILE_NOT_FOUND.
- CRRC5: If the method call causes a memory problem (e.g. memory access error), an instance of UICCException shall be thrown. The reason code shall be UICCException.MEMORY_PROBLEM.
- CRRC6: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.3.1.6.2 Test area files

 $Test\ Source: \qquad Test_Api_4_Afv_Slcts.java.$

Test Applet: Api_4_Afv_Slcts_1.java.

Cap File: api_4_Afv_slcts.cap.

5.3.1.6.3 Test coverage

CRR number	Test case number
N1	1,2
N2	5
N3	5
N4	6
N5	1, 2
N6	1, 2
N7	1, 2
N8	1,2
N9	4
N10	Tested in Api_1_Cont, test case 1 and 2
C1	3
C2	3
C3	3
C4	3
C5	Not testable
C6	Not testable

5.3.1.6.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get an AdminFileView object, UICC file	•	•
	system		
	•		
	1- get an AdminFileView		
	AdminFileViewBuilder.getTheUICCAdminFil		
	eView(CLEAR_ON_RESET)		
1	Selection possibilities		
		No exception shall be thrown	
	1- select EF _{UICC} , fid=2FF0		
	2- select DF _{TEST} , fid=1111		
	3- select EF _{CNU} , fid=6F05		
	4- select EF _{TAAA} , fid=6F16		
	5- select DF _{SUB_TEST} , fid=2211		
	6- select DF _{TEST} , fid=1111		
	7- select EF _{TAAA} , fid=6F16		
	8- select DF _{TEST} , fid=1111		
	9- select MF, fid=3F00		
	10- select DF _{TEST} , fid=1111		
	11- select EF _{TAAA} , fid=6F16		
	12- select MF, fid=3F00		
2	Selection possibilities, ADF1		
		No exception shall be thrown	
	1- get an AdminFileView		
	AdminFileViewBuilder.getTheAdminFileVie		
	w(AID_ADF1,CLEAR_ON_RESET)		
	2- select EF _{UICC} , fid=2FF0		
	3- select DF _{TEST} , fid=1111		
	4- select EF _{CNU} , fid=6F05 5- select EF _{TAAA} , fid=6F16		
	6- select DF _{SUB TEST} , fid=2211		
	7- select DF _{SUB_TEST} , fid=2211		
	8- select EF _{TAAA} , fid=6F16		
	9- select DF _{TEST} , fid=1111		

ld	Description	API Expectation	APDU Expectation
3	No selection of unreachable file		
	1- get an AdminFileView		
	AdminFileViewBuilder.getTheUICCAdminFil	2- A	
	eView(CLEAR_ON_RESET)	UICCException.FILE_NOT_FOUND shall be thrown.	
	2- select EF _{CNU} , fid=6F05	3- No exception shall be thrown	
	3- select DF _{TEST} , fid=1111	4- A	
	4- select EF _{TAA} , fid=2222 5- select EF _{CNU} , fid=6F05	UICCException.FILE_NOT_FOUND	
	6- select DF _{SUB TEST} , fid=2211	shall be thrown.	
	7- select EF _{TAA} , fid=2222	5- No exception shall be thrown	
	8- select DF _{TELECOM} , fid=7F10	6- No exception shall be thrown	
		7- No exception shall be thrown	
		8- A	
		UICCException.FILE_NOT_FOUND	
<u></u>		shall be thrown.	
4	Self selection		
	1- select MF, fid=3F00	2. No expension shall be through	
	2- select MF, fid=3F00	2- No exception shall be thrown	
	3- select DF _{TEST} , fid=1111	4- No exception shall be thrown	
	4- select DF _{TEST} , fid=1111	140 exception shall be thrown	
	5- select EF _{TAAA} , fid=6F16 6- select EF _{TAAA} , fid=6F16	6- No exception shall be thrown	
	7- get an AdminFileView		
	AdminFileViewBuilder.getTheAdminFileVie	8- No exception shall be thrown	
	w(AID_ADF1,CLEAR_ON_RESET)		
	8- select ADF, fid=7FFF 9- select ADF, fid=7FFF	9- No exception shall be thrown	
5	EF not selected after MF/DF selection		
		2- A	
	1- select MF, fid=3F00	UICCException.NO_EF_SELECTED	
	2- updateRecord() 3- select DF _{TEST} , fid=1111	shall be thrown	
	4- updateRecord()	4- A	
		UICCException.NO_EF_SELECTED	
6	No record is selected after selecting linear	shall be thrown	
6	fixed EF	1 - No exception shall be thrown.	
	IIAGU LI	2 - No exception shall be thrown.	
	1- select MF,	3 - No exception shall be thrown.	
	fid = 3F00	4 - Shall throw uicc.access.UICC	
	2- select DF _{TEST} , 3- select EF _{LARU} ,	Exception with reason code	
	4 - recNumber = 0	RECORD_NOT_FOUND.	
	mode = REC_ACC_MODE_ CURRENT	5 - No exception shall be thrown.	
	readRecord()	6 - Shall throw uicc.access.UICC	
	5- select EF _{CARU} , 6 - recNumber = 0	Exception with reason code	
	mode = REC ACC MODE CURRENT	RECORD_NOT_FOUND.	
	readRecord()		

5.3.1.7 Method status

Test Area Reference: Api_4_Afv_Stat.

5.3.1.7.1 Conformance requirement

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

5.3.1.7.1.1 Normal execution

- CRRN1: The method returns the File Control Parameter of the current selected DF/MF or ADF as defined in TS 102 221 [5].
- CRRN2: If the fcpLength is greater than the length of the response, the whole response is copied into the fcp buffer and the length of the response is returned by the method.
- CRRN3: f the fcplength is smaller than the length of the response, the first part of the response is copied into the fcp buffer and the fcpLength is returned by the method.

5.3.1.7.1.2 Parameter errors

- CRRP1: If the array fcp is null, an instance of NullPointerException shall be thrown.
- CRRP2: If fcpOffset is negative, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP3: If fcpLength is negative, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP4: If fcpOffset+fcpLength is greater than fcp.length an ArrayIndexOutOfBoundsException shall be thrown.

5.3.1.7.1.3 Context errors

- CRRC1: If the method call causes a memory problem (e.g. memory access error), an instance of UICCException shall be thrown. The reason code shall be UICCException.MEMORY_PROBLEM.
- CRRC2: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.3.1.7.2 Test area files

Test Source: Test_Api_4_Afv_Stat.java.

Test Applet: Api_4_Afv_Stat_1.java.

Cap File: Api_4_Afv_Stat.cap.

5.3.1.7.3 Test coverage

CRR number	Test case number
N1	1, 2, 3, 4, 5, 11
N2	2, 3
N3	1, 4
P1	6
P2	7
P3	8
P4	9, 10
C1	Not testable
C2	Not testable

5.3.1.7.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Status of MF		
	1- Get an AdminFileView object, UICC file get an AdminFileView FileView.getTheUICCAdminFileView(CLEAR_ON_RESET) 2- select MF byte[] fcp = new byte[127] fcp[0:2] = 0xCC fcpOffset = 3 fcpLength = 11 status()	2- Shall return 11. The first 3 bytes of fcp[] shall contain 0xCC. fcp[] shall contain following TLVs: 1. 82 02 38/78 21 //file descriptor 2. 83 02 3F 00 //file ID	
2	Status after select EF _{TARU} in MF		
	1 - select DF _{TEST} select EF _{TARU} , fid = 6F03 fcpOffset = 0 fcpLength = 127 select() status()	1- Shall return at least 19. fcp[] shall contain following TLVs: 1. 82 02 38/78 21 //file descriptor 2. 83 02 11 11 //file ID	
3	Status of DF _{TELECOM}	1 -	
	1 - fid = 7F10 fcpOffset = 0 fcpLength = 127 status()	Shall return at least 17 and the entire structure of the file control parameters. The file identifier shall be contain the fid of DF _{TELECOM} .	
4	Status DF _{TELECOM}		
	Select DF _{TELECOM} , fid=7F10 fcpOffset = 0 fcpLength = 11 status()	Shall return 11. fcp shall contain the first 11 bytes of the FCP structure starting at index 0. fcp[] shall contain following TLVs: 1. 82 02 38/78 21 //file descriptor 2. 83 02 7F 10 //file id	
5	Status ADF1 Select ADF, fid=7FFF fcpOffset = 0 fcpLength = 127	Shall return at least 27 fcp[] shall contain the entire FCP structure fcp[] shall contain following TLVs: 1. 82 02 78 21 //file descriptor 2. 84 10 A0 00 00 00 09 00 05 FF FF FF FF 89 60 00 00 00 //DF Name 3. 8A 01 05 //life cycle	
6	fcp is null	o. o. to too mile eyele	
	<pre>byte[] nullBuffer = null fcpOffset = 0 fcpLength = 34 status()</pre>	Shall throw java.lang.NullPointerException.	
7	<pre>fcpOffset < 0 fcpOffset = -1 fcpLength = 34 status()</pre>	Shall throw java.lang.ArrayIndexOutOfBoundsExce ption.	
8	fcpLength < 0		
	<pre>fcpOffset = 0 fcpLength = -1 status()</pre>	Shall throw java.lang.ArrayIndexOutOfBoundsExce ption.	
9	<pre>fcpOffset + fcpLength > fcp.length fcpOffset = fcp.length-1 fcpLength = 15 status()</pre>	Shall throw java.lang.ArrayIndexOutOfBoundsExce ption.	
10	<pre>fcpOffset + fcpLength > fcp.length fcpOffset = fcp.length+1 fcpLength = 0 status()</pre>	Shall throw java.lang.ArrayIndexOutOfBoundsExce ption.	

ld	Description	API Expectation	APDU Expectation
11	Security attributes		
	1- Using the ADF FileView select ADF, fid=7FFF select DF _{TEST} , select DF _{ARR2} , 2- Using the UICC FileView select MF, fid=3F00 select DF _{TEST} , select DF _{ARR4} ,	1- fcp[] shall contain the following TLV 8B 03 AC 00 02 or 8B 06 AC 00 00 02 01 02 2- fcp[] shall contain the following TLV 8B 03 AC 00 04 or 8B 06 AC 00 00 04 01 04	

5.3.1.8 Method readBinary

Test Area Reference: Api_4_Afv_Redb.

5.3.1.8.1 Conformance requirement

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

5.3.1.8.1.1 Normal execution

- CRRN1:. Reads the data bytes of the current transparent EF, as defined in ETSI TS 102 221 [5].
- CRRN2: The sum of respOffset plus respLength is returned. and the data bytes of the currently selected transparent file are returned in resp.

5.3.1.8.1.2 Parameter errors

- CRRP1: If fileOffset is negative, an instance of UICCException.OUT_OF_FILE_BOUNDARIES shall be thrown.
- CRRP2: If respOffset is negative, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP3: If respLength is negative, an instace of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP4: If the array resp is null, an instance of NullPointerException shall be thrown.
- CRRP5: If respOffset plus respLength is greater than the length of the array resp.length, an instance of ArrayIndexOutOfBoundsException shall be thrown and no read is performed.
- CRRP6: If fileOffset plus respLength exceeds the length of the file, an instance of UICCException shall be thrown. The reason code shall be UICCException.OUT_OF_FILE_BOUNDARIES.

5.3.1.8.1.3 Context errors

- CRRC1: If the method call causes an error to occur that is not expected and thus not handled, an instace of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.
- CRRC2: If the currently selected EF is not transparent, an instance of UICCException shall be thrown. The reason code shall be UICCException.COMMAND_INCOMPATIBLE.
- CRRC3: If the calling applet does not fulfil the access condition, READ, to perform this function, an instance
 of UICCException shall be thrown. The reason code shall be
 UICCException.SECURITY_STATUS_NOT_SATISFIED.

- CRRC4: If the currently selected EF is deactivated and the file status of the EF does not allow for the reading of an deactivated file, an instance of UICCException shall be thrown. The reason code shall be UICCException.REF_DAT_INVALIDATED.
- CRRC5:If the calling applet has currently no EF selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.NO_EF_SELECTED.

5.3.1.8.2 Test area files

Test Source: Test_Api_4_Afv_Redb.java.

Test Applet: Api_4_Afv_Redb_1.java.

Cap File: Api_4_Afv_redb.cap.

5.3.1.8.3 Test coverage

CRR number	Test case number
N1	1, 2
N2	1, 2
P1	3
P2	6
P3	7
P4	5
P5	8
P6	4
C1	Not testable
C2	9
C3	10
C4	11
C5	12

5.3.1.8.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Read from EF _{TARU}		
	1- select DF _{TEST} , fid=1111 select EF _{TARU} , fid=6F03 2- fileOffset = 0 resp.length = 260 resp[0:259] = 0x55 respOffset = 10 respLength = 250 readBinary()	2 - shall return 20. resp shall contain the contents of EF _{TARU} starting at index 10. <description 55="" ff="" of="" resp:=""></description>	
2	Read from EF _{TARU} fileOffset = 0x80 resp.length = 260 resp[0:259] = 0x55 respOffset = 5 respLength = 0x80 readBinary()	shall return 15 resp shall contain the last 5 bytes of EF _{TARU} starting at index 10. <description 55="" ff="" of="" resp:=""></description>	
3	FileOffset is negative fileOffset = -1 respOffset = 0 respLength = 10 readBinary()	Shall throw uicc.access.UICC Exception with reason code OUT_OF_FILE_BOUNDARIES.	
4	FileOffset + respLength > EF length fileOffset = 259 respOffset = 0 respLength = 2 readBinary()	Shall throw uicc.access.UICC Exception with reason code OUT_OF_FILE_BOUNDARIES.	

ld	Description	API Expectation	APDU Expectation
5	resp[] is null	·	•
	fileOffset = 0	Shall throw	
	resp = null	java.lang.NullPointerException.	
	respOffset = 0		
	respLength = 10		
_	readBinary()		
6	respOffset < 0		
	<pre>fileOffset = 0 respOffset = -1</pre>	Shall throw	
	respLength = 10	java.lang.	
	readBinary()	ArrayIndexOutOfBoundsException.	
7	respLength < 0		
'	fileOffset = 0	Shall throw	
	respOffset = 0	java.lang.	
	respLength = -1	ArrayIndexOutOfBoundsException.	
	readBinary()	ArrayindexOdiOiboundsException.	
8	RespOffset + respLength > resp.length		
	fileOffset = 0	Shall throw	
	resp.length = 20	java.lang.	
	respOffset = 10	ArrayIndexOutOfBoundsException.	
	respLength = 11	, , , , , , , , , , , , , , , , , , , ,	
_	readBinary()		
9	EF is not Transparent		
	1- select EF _{LARU} , fid=6F0C 2- fileOffset = 0		
	respOffset = 0	2 - Shall throw uicc.access.UICC	
	respLength = 1	Exception with reason code	
	readBinary()	COMMAND_INCOMPATIBLE.	
10	Access condition not fulfilled		
	1- select EF _{TRAC} , fid=6F0E	2- Shall throw uicc.access.UICC	
	2- fileOffset = 0	Exception with reason code	
	respOffset = 0	SECURITY_STATUS_NOT_SATISFIE	
	respLength = 1	D.	
	readBinary()	D.	
11	EF is deactivated		
	1 - select EF _{TARU} , fid=6F03		
	2 - deactivateFile()		
	3 - readBinary()	3 - Shall throw	
	4 - activateFile())	uicc.access.UICCException with	
		reason code	
		REF_DATA_INVALIDATED.	
12	No EF selected		
'-	1- select DF _{TEST} fid=1111	2 - Shall throw	
	2 readBinary()	uicc.access.UICCException with	
		reason code NO_EF_SELECTED.	
		peason code NO_LF_SELECTED.	

5.3.1.9 Method updateBinary

Test Area Reference: Api_4_Afv_Updb.

5.3.1.9.1 Conformance requirement

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

5.3.1.9.1.1 Normal execution

• CRRN1: Updated the data bytes of the current selected transparent EF.

5.3.1.9.1.2 Parameter errors

- CRRP1: If recOffset is less than 0, an instance of UICCException shall be thrown. The reason code shall be UICCException.OUT OF FILE BOUNDARIES.
- CRRP2: : If fileOffset plus dataLength exceeds the length of the file, an instance of UICCException shall be thrown. The reason code shall be UICCException.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.

5.3.1.9.1.3 Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.NO_EF_SELECTED.
- CRRC2: If the currently selected EF is not transparent, an instance of UICCException shall be thrown. The reason code shall be UICCException.COMMAND INCOMPATIBLE.
- CRRC3: If the calling applet does not fulfil the access condition, UPDATE, to perform this function, an instance of UICCException shall be thrown. The reason code shall be UICCException.SECURITY_STATUS_NOT_SATISFIED.
- CRRC4: If the currently selected EF is deactivated and the file status of the EF does not allow for updating of a deactivated file, an instance of UICCException shall be thrown. The reason code shall be UICCException.REF DATA INVALIDATED.
- CRRC5: If the method call causes a memory problem (e.g. memory access error), an instance of UICCException shall be thrown. The reason code shall be UICCException.MEMORY_PROBLEM.
- CRRC6: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.3.1.9.2 Test area files

Test Source: Test_Api_4_Afv_Updb.java.

Test Applet: Api_4_Afv_Updb _1.java.

Cap File: Api_4_Afv_updb.cap.

5.3.1.9.3 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,	Not Testable	
C6	Not Testable	

5.3.1.9.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get the UICC FileView	·	0
	AdminFileViewBuilder.getTheUICCAdminFil		-
	eView(CLEAR ON RESET)		
1	No EF selected		1
	fileOffset = 0	Shall throw uicc.access.UICC	·
	byte[] data = new byte[20]	Exception with reason code	
	data[0] = '55'	•	
	dataOffset = 0	NO_EF_SELECTED.	
	dataLength = 10		
	updateBinary()		
2	Update Transparent EF		
	1- select DF _{TEST} , fid = 1111	1- No exception shall be thrown.	
	2- select EF _{TARU} , fid = 6F03	2- No exception shall be thrown.	
	3- fileOffset = 3	3- No exception shall be thrown.	
	data[0] = '55'	4- No exception shall be thrown.	
	dataOffset = 0		
	dataLength = 1	Data in resp[0] shall be '55'.	
	updateBinary()		
	4- fileOffset = 3		
	respOffset = 0		
	respLength = 1		
_	readBinary()		
3	fileOffset = 254		
	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		
'	fileOffset = -1	Shall throw	
	dataOffset = 0	uicc.access.UICCException with	
	dataLength = 10	reason code	
	updateBinary()		
_	file Office to selected assembly . EE less with	OUT_OF_FILE_BOUNDARIES.	
5	fileOffset + dataLength > EF length		
	fileOffset = 259	Shall throw uicc.access.UICC	
	dataOffset = 0	Exception with reason code	
	dataLength = 2	OUT_OF_FILE_BOUNDARIES.	
	updateBinary()		
6	data is null	Chall throw	
	<pre>byte[] nullBuffer = null fileOffset = 0</pre>	Shall throw	
	dataOffset = 0	java.lang.NullPointerException.	
	dataLength = 10		
	updateBinary()		
7	dataOffset < 0		
'	fileOffset = 0	Shall throw	
	dataOffset = -1		
	dataLength = 10	java.lang.	
	updateBinary()	ArrayIndexOutOfBoundsException.	
8	dataLength < 0		
	fileOffset = 0	Shall throw	
	dataOffset = 0	java.lang.	
	dataLength = -1		
	updateBinary()	ArrayIndexOutOfBoundsException.	
9	dataOffset + dataLength > data.length		
	fileOffset = 0	Shall throw	
	dataOffset = 10	java.lang.	
	dataLength = 11	ArrayIndexOutOfBoundsException.	
	updateBinary()	ArrayindexOdiOiboundSexception.	

ld	Description	API Expectation	APDU Expectation
10	<pre>EF is not Transparent 1- select DF_{TEST}, fid = 1111 2- select DF_{LARU}, fid = 6F0C 3 - fileOffset = 0 data[0] = '55' dataOffset = 0 dataLength = 1 updateBinary()</pre>	1- No exception shall be thrown. 2- No exception shall be thrown. 3- Shall throw uicc.access.UICC Exception with reason code COMMAND_INCOMPATIBLE.	
11	Access condition not fulfilled 1- select DF _{TEST} , fid = 1111 2- select EF _{TNU} , fid = 6F02 3- fileOffset = 0 data[0] = '55' dataOffset = 0 dataLength = 1 updateBinary()	1- No exception shall be thrown. 2- No exception shall be thrown. 3- Shall throw uicc.access.UICCException with reason code SECURITY_STATUS_NOT_SATISFIE D.	
12	<pre>EF is deactivated 1- select EF_{TNR}, fid = 6F01 deactiveFile() 2- fileOffset = 0 data[0] = '55' dataOffset = 0 dataLength = 1 updateBinary() 3- activateFile()</pre>	1- No exception shall be thrown. 2- Shall throw uicc.access.UICCException with reason code REF_DATA_INVALIDATED 3- No exception shall be thrown.	

5.3.1.10 Method readRecord

Test Area Reference: Api_4_Afv_Redr.

5.3.1.10.1 Conformance requirement

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

5.3.1.10.1.1 Normal execution

- CRRN1: Reads a record or a part of record of a current linear fixed or cyclic EF into byte array resp and the sum of respOffset plus respLength is returned.
- CRRN2: If the access mode is REC_ACC_MODE_CURRENT the current record will be read and the current record pointer shall not be changed.
- CRRN3: If the access mode is REC_ACC_MODE_ABSOLUTE the record addressed by recNumber will be read and the current record pointer shall not be changed.
- CRRN4: If the access mode is REC_ACC_MODE_NEXT the next record relative to the current selected record will be selected and read. The record pointer will be incremented.
- CRRN5: If the access mode is REC_ACC_MODE_NEXT and no current record is selected, the first record will be selected and read. The record pointer will be incremented.
- CRRN6: If the access mode is REC_ACC_MODE NEXT and the current record pointer, of a cyclic EF, is set to the last record, the record pointer is set to the first record and the record is read.
- CRRN7: If the access mode is REC_ACC_MODE_PREVIOUS the previous record relative to the current selected record will be selected and read.

- CRRN8: If the access mode is REC_ACC_MODE PREVIOUS and no current record is selected, the last record will be selected and read.
- CRRN9:If the access mode is REC_ACC_MODE_PREVIOUS and the current record pointer of a cyclic EF is set to the first record, the record pointer is set to the last record in this EF and this record shall be read.
- CRRN10: The current record pointer of any other applet shall not be changed.

5.3.1.10.1.2 Parameter errors

- CRRP1: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE_ABSOLUTE and recNumber is less than 0 or greater than records available, an instance of UICCException shall be thrown. The reason code shall be UICCException.RECORD_NOT_FOUND.
- CRRP2: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE_CURRENT, recNumber is 0 and there is no current record selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.RECORD_NOT_FOUND.
- 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 UICCException shall be thrown. The reason code shall be UICCException.RECORD_NOT_FOUND.
- 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 UICCException shall be thrown. The reason code shall be UICCException.RECORD NOT FOUND.
- CRRP5: If the specified offset into the selected record recOffset is less than 0, an instance of UICCException shall be thrown. The reason code shall be UICCException.OUT_OF_RECORD_BOUNDARIES.
- CRRP6: If recOffset plus respLength is greater than the record length, an instance of UICCException shall be thrown. The reason code shall be UICC Exception.OUT_OF_RECORD_BOUNDARIES.
- CRRP7: If the access mode is not between 2 and 4 (2 = REC_ACC_MODE_NEXT, etc.), an instance of UICCException shall be thrown. The reason code shall be UICC Exception.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.

5.3.1.10.1.3 Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.NO_EF_SELECTED.
- CRRC2: If the currently selected EF is neither linear fixed nor cyclic, an instance of UICCException shall be thrown. The reason code shall be UICCException.COMMAND_INCOMPATIBLE.
- CRRC3: If the calling applet does not fulfil the access condition, READ, to perform this function, an instance
 of UICCException shall be thrown. The reason code shall be
 UICCException.SECURITY STATUS NOT SATISFIED.
- 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 UICCException shall be thrown. The reason code shall be UICCException.REF_DATA_INVALIDATED.
- CRRC5: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.3.1.10.2 Test area files

 $Test\ Source: \qquad Test_Api_4_Afv_Redr.java.$

Test Applet: Api_4_Afv_Rredr_1.java.

Cap File: Api_4_Afv_redr.cap.

5.3.1.10.3 Test coverage

CRR number	Test case number
N1	2, 3, 4, 5,6, 8, 9, 10, 11, 12, 13
N2	3, 9 2, 8
N3	2, 8
N4	4, 5, 10, 11
N5	4, 11
N6	11
N7	6, 7, 12, 13
N8	6, 13
N9	12
N10	
P1	14
P2	15
P3	5 7
P4	7
P5	16
P6	17
P7	18
P8	19
P9	20
P10	21
P11	22
C1	1
C2	23
C3	24
C4	25
C5	Not testable

5.3.1.10.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	No EF selected 1- select DF _{TEST} , fid=1111 2- recNumber = 1 mode = REC_ACC_MODE_ABSOLUTE recOffset = 0 byte[] resp = new byte[20] respOffset = 0 respLength = 10 readRecord()	2-Shall throw uicc.access.UICCException with reason code NO_EF_SELECTED.	
2	Read Absolute from Linear Fixed EF 1 - select EF _{LARU} , fid=6F0c // Record pointer not set. 2 - recNumber = 2 mode = REC_ACC_MODE_ABSOLUTE recOffset = 0 respOffset = 0 respLength = 4 readRecord() 3 - recNumber = 0 mode = REC_ACC_MODE_NEXT recOffset = 0 respOffset = 0 respOffset = 0 respOffset = 0 respLength = 4 readRecord()	<pre>2 - resp shall be: resp={0xAA,0xAA,0xAA,0xAA} 3 - resp shall be: Resp={0x55,0x55,0x55,0x55}</pre>	

ld	Description	API Expectation	APDU Expectation
3	Read Current from Linear Fixed EF	, , , , , , , , , , , , , , , , , , , ,	,
	//record pointer shall not be changed	resp shall be:	
	1- recNumber = 0	$resp={0x55,0x55,0x55,0x55}$	
	mode = REC ACC MODE CURRENT		
	recOffset = 0		
	respOffset = 0		
	respLength = 4		
	readRecord()		
4	Read Next from Linear Fixed EF		
	1- select EF _{LARU} , fid=6F0c	1- resp shall be:	
	//no record selected	$resp={0x55,0x55,0x55,0x55}$	
	recNumber = 0		
	mode = REC_ACC_MODE_NEXT		
	recOffset = 0		
	respOffset = 0		
	respLength = 4	2- resp shall be:	
	readRecord()	resp={0xAA,0xAA,0xAA,0xAA}	
	2- recNumber = 0 mode = REC ACC MODE NEXT		
	recOffset = 0		
	respOffset = 0		
	respLength = 4		
	readRecord()		
5	Read Next from Linear Fixed EF		
	recNumber = 0	Shall throw uicc.access.UICC	
	mode = REC ACC MODE NEXT	Exception with reason code	
	recOffset = 0	RECORD NOT FOUND.	
	respOffset = 0		
	respLength = 4		
	readRecord()		
6	Read Previous from Linear Fixed EF		
	1- recNumber = 0		
	mode = REC_ACC_MODE_PREVIOUS		
	recOffset = 0		
	respOffset = 0		
	respLength = 4	1- resp shall be:	
	readRecord()	resp= $\{0x55,0x55,0x55,0x55\}$	
	2- select EF _{LARU} , fid=6F0c		
	//no record selected recNumber = 0		
	mode = REC_ACC_MODE_PREVIOUS		
	recOffset = 0		
	respOffset = 0		
	respLength = 4	2- resp shall be:	
	readRecord()	resp={0xAA,0xAA,0xAA,0xAA}	
	3- Set the record to the first record	3- resp= $\{0x55,0x55,0x55,0x55\}$	
	by reading the file		
	recNumber = 0		
	mode = REC_ACC_MODE_PREVIOUS		
	recOffset = 0		
	respOffset = 0		
<u> </u>	respLength = 4		
7	Read Previous from Linear Fixed EF	Shall throw	
	recNumber = 0	uicc.access.UICCException with	
	mode = REC_ACC_MODE_PREVIOUS	reason code RECORD NOT FOUND.	
	recOffset = 0 respOffset = 0	Teason code Ricord _Noi_Foond.	
	respLength = 4		
	readRecord()		
	12000100010()		

ld	Description	API Expectation	APDU Expectation
8	Read Absolute from Cyclic EF		
_	1 select EF _{CARU} , fid = 6F09		
	2- recNumber = 2	2 - resp shall be:	
	mode = REC ACC MODE ABSOLUTE	resp={0xAA,0xAA,0xAA}	
	recOffset = 0		
	respOffset = 0		
	respLength = 3		
	readRecord()	2	
	3- recNumber = 1	3 - resp shall be: resp={0xAA,0xAA,0xAA}	
	<pre>readRecord() 4- Read the file in next mode to set the</pre>		
	record pointer to the first position.	resp={0xAA,0xAA,0xAA}	
	recNumber = 0		
	mode = REC ACC MODE NEXT		
	recOffset = 0		
	respOffset = 0		
	respLength = 3		
	readRecord()		
9	Read Current from Cyclic EF		
	//record pointer shall not be changed		
	//from testcase before	1- resp shall be:	
	1- recNumber = 0	resp={0xAA,0xAA,0xAA}	
	<pre>mode = REC_ACC_MODE_CURRENT recOffset = 0</pre>	Took- (ours) ours)	
	respOffset = 0		
	respLength = 3		
	readRecord()		
10	Read Next from Cyclic EF		
	recNumber = 0	resp shall be:	
	mode = REC_ACC_MODE_NEXT	resp={0xAA,0xAA,0xAA}	
	recOffset = 0		
	respOffset = 0		
	respLength = 3 readRecord()		
11	Read Next from Cyclic EF		
' '	1- recNumber = 0	1- resp shall be:	
	mode = REC ACC MODE NEXT	resp={0x55,0x55,0x55}	
	recOffset = 0		
	respOffset = 0		
	respLength = 3		
	readRecord()		
	2- select EF_{CARU} , fid = 6F09	2- Shall throw	
	//no rec selected	uicc.access.UICCException with reason code RECORD NOT FOUND.	
	recNumber = 0	reason code RECORD_NOT_FOUND.	
	<pre>mode = REC_ACC_MODE_NEXT recOffset = 0</pre>		
	respOffset = 0		
	respLength = 3		
	readRecord()		
<u> </u>			
12	Read Previous from Cyclic EF		
	1- recNumber = 0		
	mode = REC_ACC_MODE_PREVIOUS	1 room aball be	
	recOffset = 0	1- resp shall be: resp={0xAA,0xAA,0xAA}	
	respOffset = 0 respLength = 3	TCDP- (OVUE, OVUE, OVUE)	
	readRecord()		
13	Read Previous from Cyclic EF		
'	1- recNumber = 0		
	mode = REC_ACC_MODE_PREVIOUS		
	recOffset = 0		
	respOffset = 0		
	respLength = 3	1- resp shall be:	
	readRecord()	resp={0x55,0x55,0x55}	
	2- select EF _{CARU} , fid = 6F09 // no rec selected		
	// no rec selected recNumber = 0		
	mode = REC ACC MODE PREVIOUS		
	recOffset = 0		
	respOffset = 0	2- resp shall be:	
	respLength = 3	resp={0xAA,0xAA,0xAA}	
	readRecord()		

ld	Description	API Expectation	APDU Expectation
	Read Absolute from Linear Fixed EF beyond	All Expodution	Al De Expediation
	Records		
	1- select EF _{LARU} , fid=6F0C	2- Shall throw an	
	2- recNumber = -1	uicc.access.UICCException with	
	mode = REC ACC MODE ABSOLUTE	reason code	
	recOffset = 0	UICCException.RECORD_NOT_FOUND.	
	respOffset = 0	2 (2) - 11 + 1	
	respLength = 4	3- Shall throw an uicc.access.UICCException with	
	readRecord()	reason code	
	<pre>3- recNumber = 3 readRecord()</pre>	UICCException.RECORD NOT FOUND.	
15	No current record in linear fixed EF, read		
	current		
	1- select EF _{LARU} , fid=6F0C // No current		
	record		
	2- recNumber = 0 // curr rec	2 - Shall throw uicc.access.UICC	
	mode = REC_ACC_MODE_CURRENT	Exception with reason code	
	recOffset = 0	RECORD_NOT_FOUND.	
	respOffset = 0		
	respLength = 4		
16	readRecord() recOffset < 0		
_	1- select EF _{LARU} , fid=6F0C		
	2- recNumber = 1 // rec 1	2 - Shall throw	
	mode = REC ACC MODE ABSOLUTE	uicc.access.UICCException with	
	recOffset = -1	reason code	
	respOffset = 0	OUT_OF_RECORD_BOUNDARIES.	
	respLength = 4		
	readRecord()		
17	3 3		
	1- select EF _{LARU} , fid=6F0C		
	2- recNumber = 1 mode = REC ACC MODE ABSOLUTE	2 - Shall throw	
	recOffset = 2	sim.access.SIMViewException with reason code	
	respOffset = 0	OUT_OF_RECORD_BOUNDARIES.	
	respLength = 4	ooi_oi_kheokb_bookbikkibb.	
	readRecord()		
18	Reading with invalid mode		
	1- select EF _{LARU} , fid=6F0C		
	2- recNumber = 0	2 - Shall throw	
	<pre>mode = 1 recOffset = 0</pre>	uicc.access.UICCException with reason code	
	respOffset = 0	COMMAND INCOMPATIBLE.	
	respLength = 4	3 - Shall throw uicc.access.	
	readRecord()	UICCException with reason code	
	3- mode = 5	COMMAND_INCOMPATIBLE.	
	readRecord()		
19	resp is null		
	resp[] = null	Shall throw java.lang.NullPointerException.	
	<pre>mode = REC_ACC_MODE_CURRENT respOffset = 0</pre>	Java. rang. NurreornterException.	
	respLength = 10		
	readRecord()		
20	respOffset < 0		
	respOffset = -1	Shall throw	
	respLength = 10	java.lang.ArrayIndexOutOfBoundsE	
	readRecord ()	xception.	
21	respLength < 0	Shall throw	
	respOffset = 0	<pre>java.lang. ArrayIndexOutOfBoundsException.</pre>	
	respLength = -1 readRecord ()	ATTAYTHAENOULOTBOUNGSEXCEPCTON.	
22	respOffset + respLength > resp.length		
22	respOffset = 11	Shall throw	
	respLength = 4	java.lang.	
	readRecord ()	ArrayIndexOutOfBoundsException.	
23		_	
	1- select $\mathrm{EF}_{\mathtt{TNU}}$, fid=6F02		
	2- respOffset = 0	2 - Shall throw	
	respLength = 4	uicc.access.UICCException with	
	readRecord()	reason code	
Ь		COMMAND_INCOMPATIBLE.	

ld	Description	API Expectation	APDU Expectation
24	Access condition not fulfilled		
	1- select EF _{CNR} , fid=6F04	2 - Shall throw	
	2 - respLength = 3	uicc.access.UICCException with	
	readRecord()	reason code	
		SECURITY_STATUS_NOT_SATISFIED.	
25	EF is deactivated		
	1 - select EF _{CNU} , fid=6F05	2 - Shall throw uicc.access.UICC	
	deactivateFile()	Exception with reason code	
	2 - readRecord()	REF_DATA_INVALIDATED	
	3 - activateFile		

5.3.1.11 Method updateRecord

Test Area Reference: Api_4_Afv_Updr.

5.3.1.11.1 Conformance requirement

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

5.3.1.11.1.1 Normal execution

- CRRN1: Reads a record or a part of record of the current linear fixed or cyclic EF into byte array data[].
- CRRN2: If the access mode is REC_ACC_MODE_ CURRENT the current selected record will be updated. The current record pointer shall not be changed.
- CRRN3:If the access mode is REC_ACC_MODE_ABSOLUTE and the file is linear fixed EF, the record addresss by recNumber will be updated. The current record pointer shall not be changed.
- CRRN4: 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. The record pointer shall be updated.
- CRRN5: If the access mode is REC_ACC_MODE_NEXT and the record pointer has not been previously set within the selected EF, the record pointer shall be set to the first record and this record should be updated.
- CRRN6: If the access mode is REC_ACC_MODE_PREVIOUS the previous record relative to the current selected record will be selected and updated. The record pointer shall be updated.
- CRRN7: If the access mode is REC_ACC_MODE_PREVIOUS and the record pointer has not been previously set within the selected EF, then the record pointer should be set to the last record in this EF. This record should be updated.
- CRRN8: If the access mode is REC_ACC_MODE_PREVIOUS, the file is a cyclic EF, the oldest record will
 be updated independent of the current record pointer and this record becomes record number 1 and the current
 record.

5.3.1.11.1.2 Parameter errors

- CRRP1: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE_ABSOLUTE and recNumber is less than 0 or greater than records available, an instance of UICCException shall be thrown. The reason code shall be UICCException.RECORD_NOT_FOUND.
- CRRP2: If the currently selected EF is linear fixed and the access mode is REC_ACC_MODE _CURRENT, recNumber is 0 and there is no current record selected, an instance of UICCException shall be thrown. The reason code shall be UICCException. RECORD_NOT_FOUND.
- 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 UICCException shall be thrown. The reason code
 shall be UICCException. RECORD_NOT_FOUND.
- 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 UICCException shall be thrown. The
 reason code shall be UICCException. RECORD_NOT_FOUND.
- CRRP5: If the specified offset into the selected record recOffset is less than 0, an instance of UICCException shall be thrown. The reason code shall be UICCException.OUT OF RECORD BOUNDARIES.
- CRRP6: If recOffset plus dataLength is greater than the record length, an instance of UICCException shall be thrown. The reason code shall be UICCException.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 UICCException shall be thrown. The reason code shall be UICCException.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 UICCException shall be thrown. The reason code shall be UICCException.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.

5.3.1.11.1.3 Context errors

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

5.3.1.11.2 Test area files

 $Test\ Source: \qquad Test_Api_4_Afv_Updr.java.$

Test Applet: Api_4_Afv_ Updr_1.java.

Cap File: Api_4_Afv_updr.cap.

5.3.1.11.3 Test coverage

CRR number	Test case number
N1	2, 3, 4, 5, 7, 8, 10 2 3
N2	2
N3	3
N4	5
N5	4
N6	7, 8, 9, 10
N7	7
N8	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 C2	1
C2	21
C3	22
C4	23
C5	Not testable
C6	Not testable

5.3.1.11.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Get the UICC AdminFileView	ATTEXPOOLUTION	711 DO EXPOSITATION
	AdminFileViewBuilder.getTheUICCAdminFil		
	eView (CLEAR ON RESET)		
1	No EF selected		
'	RecNumber = 1	Shall throw uicc.access.UICC Exception	
	mode = REC ACC MODE ABSOLUTE		
	recOffset = 0	with reason code NO_EF_SELECTED.	
	<pre>byte[] data = new byte[20]</pre>		
	dataOffset = 0		
	dataLength = 10		
	updateRecord()		
2	Update Absolute from Linear Fixed EF		
	1- select DF _{TEST} , fid = 1111		
	2- select EF _{LARU} , fid = 6F0C	1- No exception shall be thrown.	
	// Record pointer not set.	2- No exception shall be thrown.	
	3- recNumber = 2	2 140 exception onal be thrown.	
	mode = REC_ACC_MODE_ABSOLUTE	3- No exception shall be thrown.	
	data[0:3] = '11'	3- No exception shall be thrown.	
	recOffset = 0		
	dataOffset = 0		
	<pre>dataLength = 4 updateRecord()</pre>		
	respOffset = 0		
	respLength = 0		
	readRecord()		
	4- // verify result		
	read respOffset = 0		
	respLength = 4		
	recNumber = 0	4- Resp shall be: 11 11 11 11	
	mode = REC_ACC_MODE_CURRENT	'	
	readRecord()		
3	Update Current from Linear Fixed EF		
	1- select DF_{TEST} , fid = 1111	 No exception shall be thrown. 	
	2- select EF _{LARU} , fid = 6F0C	No exception shall be thrown.	
	// Set record pointer with mode "next".		
	3- recNumber = 0	3- No exception shall be thrown.	
	<pre>mode = REC_ACC_MODE_NEXT recOffset = 0</pre>	'	
	data[0:3] = '00'		
	dataOffset = 0		
	dataLength = 4		
	updateRecord()		
	// write data with mode "current"		
	4- recNumber = 0		
	data[0:3] = '22'		
	mode = REC_ACC_MODECURRENT		
	updateRecord()		
	5- //verify result		
	respOffset = 0		
	respLength = 4 recNumber = 0	5- No exception shall be thrown.	
	mode = REC ACC MODE CURRENT	resp shall be:	
	readRecord()	resp[0] = '22'	
	redunesoru ()	resp[1] = '22'	
		resp[2] = '22'	
		resp[3] = '22'	
4	Update Next from Linear Fixed EF, no		
	record pointer set		
	1- select DF_{TEST} , fid = 1111	1- No exception shall be thrown.	
	2- select EF_{LARU} , fid = 6F0C	2- No exception shall be thrown.	
	3- recNumber = 0		
	mode = REC_ACC_MODE_NEXT		
	recOffset = 0		
	data[0:3] = '33'		
	dataOffset = respOffset = 0	1- No exception shall be through	
	<pre>dataLength = respLength = 4 updateRecord()</pre>	4- No exception shall be thrown.	
	mode = REC ACC MODE ABSOLUTE CURRENT	resp shall be:	
	4-// verify result	resp[0] = '33'	
	readRecord()	resp[1] = '33'	
		resp[2] = '33'	
		resp[3] = '33'	

ld	Description	API Expectation	APDU Expectation
5	Update Next from Linear Fixed EF, record		
	pointer set	1- No exception shall be thrown.	
	1- recNumber = 0		
	<pre>mode = REC_ACC_MODE_NEXT recOffset = 0</pre>		
	recollset = 0 data[0:3] = '44'		
	dataOffset = 0	2- No exception shall be thrown.	
	dataLength = 4	resp shall be:	
	updateRecord()	resp[0] = '44'	
	2- //verify result	resp[1] = '44'	
	readRecord()	resp[2] = '44'	
		resp[3] = '44'	
6	Update Next from Linear Fixed EF, no more		
	records recNumber = 0	Chall throw vice coses LUCCE vertice	
	mode = REC ACC MODE NEXT	Shall throw uicc.access.UICCException	
	recOffset = 0	with reason code	
	data[0:3] = '55'	RECORD_NOT_FOUND.	
	dataOffset = 0		
	dataLength = 4		
7	updateRecord()		
'	Update Previous from Linear Fixed EF, no record pointer set		
	1- select DF _{TRST} , fid = 1111	1- No exception shall be thrown.	
	2- select EF _{LARU} , fid = 6F0C	2- No exception shall be thrown.	
	3- recNumber = 0	3- No exception shall be thrown.	
	mode = REC_ACC_MODE_PREVIOUS	The exception on all be une will	
	recOffset = 0		
	<pre>data[0:3] = '66' dataOffset = respOffset = 0</pre>		
	dataLength = respLength = 4	4- No exception shall be thrown.	
	updateRecord()	resp shall be:	
	4- //verify result	resp[0] = '66'	
	readRecord()	resp[1] = '66'	
		resp[2] = '66'	
		resp[3] = '66'	
8	Update Previous from Linear Fixed EF,		
	record pointer set		
	1- recNumber = 0	1- No exception shall be thrown	
	<pre>mode = REC_ACC_MODE_PREVIOUS recOffset = 0</pre>		
	data[0:3] = '77'	2- No exception shall be thrown.	
	dataOffset = respOffset = 0	esp shall be:	
	dataLength = respLength = 4	resp[0] = '77'	
	updateRecord()	resp[1] = '77'	
	2- //verify result	resp[2] = '77'	
	readRecord()	resp[3] = '77'	
9	Update Previous from Linear Fixed EF , no		
	more records		
	recNumber = 0	Shall throw	
	mode = REC_ACC_MODE_PREVIOUS	sim.access.SIMViewException with	
	recOffset = 0	reason code RECORD_NOT_FOUND.	
	<pre>data[0:3] = '88' dataOffset = respOffset = 0</pre>		
	dataLength = respLength = 4		

ld	Description	API Expectation	APDU Expectation
10	Update Previous from Cyclic EF		L
	1- select DF _{TEST} , fid = 1111		
	2- select EF _{CARU} , fid = 6F09	1- No exception shall be thrown.	
	3- recNumber = 2 mode = REC_ACC_MODE_ABSOLUTE	2- No exception shall be thrown.	
	recOffset = 0	No exception shall be thrown.	
	respOffset = 0		
	respLength = 3		
	readRecord() 4- recNumber = 2		
	mode = REC ACC MODE PREVIOUS	4- No exception shall be thrown.	
	data[0:2] = 'FF'	4- No exception shall be thrown.	
	dataOffset = 0		
	dataLength = 3		
	<pre>updateRecord() 5- //verify result</pre>		
	readRecord()		
		5- No exception shall be thrown.	
		resp shall be:	
		resp[0] = 'FF'resp[1] = 'FF'	
		resp[2] = 'FF'	
11	Update Absolute from Linear Fixed EF		
	beyond Records 1- select EFLARU, fid = 6F0C	1- No exception shall be thrown.	
	2-recNumber = -1	2- Shall throw	
	mode = REC_ACC_MODE_ABSOLUTE	uicc.access.UICCException with reason	
	recOffset = 0	code RECORD_NOT_FOUND.	
	<pre>dataOffset = 0 dataLength = 4</pre>	3- Shall throw	
	updateRecord()	uicc.access.UICCException with reason	
	3- recNumber = 3	code RECORD_NOT_FOUND.	
	updateRecord()		
12	No current record in linear fixed EF, update		
	current 1- select EF _{LARU} , fid = 6F0C	1. No expension shall be through	
	// No curr rec	1 - No exception shall be thrown.	
	2- recNumber = 0 // curr rec	2 - Shall throw	
	mode = REC_ACC_MODE _CURRENT	uicc.access.UICCException with reason	
	recOffset = 0 dataOffset = 0	code RECORD_NOT_FOUND.	
	dataLength = 4		
	updateRecord()		
13	recOffset < 0		
	1- select EF _{LARU} , fid = 6F0C 2- recNumber = 1 // rec 1	1- No exception shall be thrown.	
	mode = REC_ACC_MODE_ABSOLUTE	2- Shall throw uicc.access.UICC	
	dataOffset = 0	Exception with reason code OUT_OF_RECORD_BOUNDARIES.	
	dataLength = 4	COT_OT_RECORD_DOUNDARIES.	
14	updateRecord() recOffset + dataLength > record.length		
14	1- select EF _{LARU} , fid = 6F0C	1- No exception shall be thrown.	
	2- recNumber = 1	. The exception shall be thrown.	
	mode = REC_ACC_MODE_ABSOLUTE	2- Shall throw uicc.access.UICC	
	recOffset = 2 dataOffset = 0	Exception with reason code	
	dataOffset = 0 dataLength = 4	OUT_OF_RECORD_BOUNDARIES.	
	updateRecord()		
15	Updating with invalid mode		
	1- select EF _{LARU} , fid = 6F0C	1 - No exception shall be thrown.	
	2- recNumber = 0 mode = 1	2 - Shall throw uicc.access.UICC	
	recOffset = 0	Exception with reason code	
	dataOffset = 0	INVALID_MODE.	
	dataLength = 4		
	<pre>updateRecord() 3- mode = 5</pre>	3 - Shall throw uicc.access. UICC	
	updateRecord()	Exception with reason code	
		INVALID_MODE.	
		-	l .

ld	Description	API Expectation	APDU Expectation
16	Updating Cyclic EF with invalid mode	, and the second	
	1- select DF_{TEST} , fid = 1111	1 - No exception shall be thrown.	
	2- select EF _{CARU} , fid = 6F09	2 - No exception shall be thrown.	
	set record pointer to record nr 1	3 - Shall throw uicc.access. UICC	
	3- recNumber = 0	Exception with reason code	
	<pre>mode = REC_ACC_MODE_NEXT recOffset = 0</pre>	INVALID_MODE.	
	data[0:2] = '00'		
	dataOffset = 0		
	dataLength = 3		
	updateRecord()		
	4- recNumber = 0	4 - Shall throw uicc.access.UICC	
	mode = REC_ACC_MODE_ABSOLUTE	Exception with reason code	
	<pre>updateRecord() 5- recNumber = 2</pre>	INVALID_MODE.	
	mode = REC ACC MODE ABSOLUTE	5 - Shall throw uicc.access. UICC	
	updateRecord()	Exception with reason code	
		INVALID_MODE.	
17	data[] is null		
	data[] = null	Shall throw	
	dataOffset = 0	java.lang.NullPointerException.	
	dataLength = 10		
18	updateRecord() dataOffset < 0		
10	dataOffset = -1	Shall throw	
	dataLength = 10	java.lang.	
	updateRecord()	ArrayIndexOutOfBoundsException.	
19	dataLength < 0	ArrayindexOdiOiBodildsException.	
19	dataOffset = 0	Shall throw	
	dataLength = -1	java.lang.	
	updateRecord()	ArrayIndexOutOfBoundsException.	
20	dataOffset + dataLength > data.length	/ may mack out or bounds Exception.	
20	dataOffset = 10	Shall throw	
	dataLength = 11	java.lang.	
	updateRecord()	ArrayIndexOutOfBoundsException.	
21	EF is neither Cyclic nor Linear Fixed	/ may mack out or bounds Exception.	
	1- select DF _{TEST} , fid = 1111	1- No exception shall be thrown.	
	2- select EF _{TARU} , fid = 6F03	2- No exception shall be thrown.	
	3- dataOffset = 0	3- Shall throw uii.access.UICC	
	dataLength = 4	Exception with reason code	
	updateRecord()	COMMAND_INCOMPATIBLE.	
22	Access condition not fulfilled	= 11	
	1- select EF _{CNU} , fid = 6F05	1- No exception shall be thrown.	
	2- recOffset = 0	2- Shall throw uicc.access.UICC	
	dataOffset = 0	Exception with reason code	
	dataLength = 1 mode = REC ACC MODE PREVIOUS	SECURITY_STATUS_NOT_SATISFIE	
	updateRecord()	D.	
	3- fid = EFLNU		
	select()		
	4- recNumber = 1	3- No exception shall be thrown.	
	<pre>mode = REC_ACC_MODE_ CURRENT recOffset = 0</pre>		
	dataOffset = 0	4- Shall throw uicc.access.UICC	
	dataLength = 1	Exception with reason code	
	updateRecord()	SECURITY_STATUS_NOT_SATISFIE	
- 00		D	
23	EF is deactivated	1. No evention shall be the sum	
	1- select EF _{CNR} , fid = 6F04 invalidate()	1- No exception shall be thrown.	
	2- updateRecord()	2- Shall throw	
	3- activateFile()	uicc.access.UICCException with reason	
	4- restore the file content EFLARU, EFCARU	codeREF_DATA_INVALIDATED	
	Restore the file content	3- No exception shall be thrown.	
	1- restore the file content of EF _{LARU} :		
	record 1 = $0x55,0x55,0x55$		
	record 2 = 0xAA,0xAA,0xAA,0xAA		
	2- restore the file content of EF_{CARU} :		
	record 1 = 0x55,0x55,0x55		
	record 2 = 0xAA,0xAA,0xAA		

5.3.1.12 Method searchRecord

Test Area Reference: Api_4_Afv_Sear.

5.3.1.12.1 Conformance requirement

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

5.3.1.12.1.1 Normal execution

- CRRN1: Search a given pattern in byte array patt[] of a current linear fixed or cyclic EF.
- CRRN2: If the pattern is found, the number of each record is stored in byte array response[] and the total number of updated bytes in the array response[] buffer is returned.
- CRRN3: If the value of respLength is greater than the number of records found, the whole response is copied into the response buffer and the number of elements copied is returned by the method.
- CRRN4: If the value of respLength is smaller than the number of found patterns, the first record numbers are copied into the response array and the value of respLength is returned.
- CRRN5: If mode is SIMPLE_SEARCH_START_FORWARD, the search starts at the given record number forward towards the end of the file.
- CRRN6: If mode is SIMPLE_SEARCH_START_BACKWARD, the search starts at a given record number backward towards to the beginning of the file.
- CRRN7: If mode is ENHANCED_SEARCH and SEARCH_INDICATION_START_BACKWARD_FROM_PREVIOUS is set in searchIndication, the search is backward starting from previous record towards to the beginning of the file.
- CRRN8: If the mode is ENHANCED_SEARCH and SEARCH_INDICATION_START_BACKWARD_FROM_PREVIOUS_GR is set in searchIndication, the search is backward starting at a given record from previous record towards to the beginning of the file.
- CRRN9: If the mode is ENHANCED_SEARCH and SEARCH_INDICATION_START_FORWARD_FROM_NEXT is set in searchIndication, the search is forward starting at the next record towards the end of the file.
- CRRN10: If the mode is ENHANCED_SEARCH and SEARCH_INDICATION_FORWARD_FROM_NEXT_GR is set in searchIndication, the search is forward starting at a given record number towards to the end of the file.
- CRRN11: If the mode is ENHANCED_SEARCH, and bit 4 of the most significant byte of the searchIndication is not set, the search starts in the record from the offset (absolute position) given in the less significant byte of searchIndication.
- CRRN12: If the mode is ENHANCED_SEARCH, and bit 4 of the most significant byte of the searchIndication is set, the search starts in the record after the first occurrence of the value contained in the less significant byte of searchIndication.
- CRRN13: If pattern given in patt[] is not found, the method returns 0.

• CRRN14: If one or more matches are found the record pointer shall be set to the first record where the search pattern was found.

5.3.1.12.1.2 Parameter errors

- CRRP1: If mode is not 4, 5 or 6, an instance of UICCException shall be thrown. The reason code shall be UICCException.INVALID_MODE.
- CRRP2: If the pattern array patt is null, an instance of java.lang.NullPointerException shall be thrown.
- CRRP3: If the response array response is null, an instance of java.lang.NullPointerExceptino shall be thrown.
- CRRP4: If parameter pattOffset is negative, an instance of java.lang.ArrayIndexOutOfBoundsException shall be thrown.
- CRRP5: If parameter pattLength is negative, an instance of java.lang.ArrayIndexOutOfBoundsException shall be thrown.
- CRRP6: If parameter respOffset is negative, an instance of java.lang.ArrayIndexOutOfBoundsException shall be thrown.
- CRRP7: If parameter respLength negative, an instance of java.lang.ArrayIndexOutOfBoundsException shall be thrown.
- CRRP8: If parameter pattOffset plus pattLength are greater than the length of array patt, an instance of java.lang.ArrayIndexOutOfBoundsException shall be thrown.
- CRRP9: If parameter respOffset plus respLength are greater than the length of array response a ArrayIndexOutOfBoundsException shall be thrown.
- CRRP10: If parameter recordNum is negative, an instance of UICCException shall be thrown. The reason code shall be UICCException.RECORD_NOT_FOUND.
- CRRP11: If parameter recordNum is greather than, the total number of records from the currently selected EF, an instance of UICCException shall be thrown. The reason code shall be UICCException.RECORD NOT FOUND.
- CRRP12 If pattLength is greater than record size of the currently selected EF an instance of UICCException shall be thrown. The reason code shall be UICCException.OUT_OF_FILE_BOUNDARIES.

5.3.1.12.1.3 Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.NO EF SELECTED.
- CRRC2: If the currently selected EF is not linear fixed or cyclic, an instance of UICCException shall be thrown. The reason code shall be UICCException.COMMAND INCOMPATIBLE.
- CRRC3: If the calling applet does not fulfil the access condition, READ, to perform this function, an instance of UICCException shall be thrown. The reason code shall be UICCException.SECURITY_STATUS_NOT_SATISFIED.
- CRRC4: If the currently selected EF is deactivated and the file status of the EF does not allow for reading a
 deactivated file, an instance of UICCException shall be thrown. The reason code shall be
 UICCException.REF DATA INVALIDATED.
- CRRC5: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.3.1.12.2 Test area files

Test Source: Test_Api_4_Afv_Sear.java.

Test Applet: Api_4_Afv_Sear_1.java.

Cap File: Api_4_Afv_sear.cap.

5.3.1.12.3 Test coverage

CRR number	Test case number	
N1	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	
N2	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	
N3	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	
N4	12	
N5	2, 28	
N6	3, 29	
N7	6, 7, 34, 35	
N8	8, 9, 36, 37	
N9	10, 11, 30, 31	
N10	12, 13, 32, 33	
N11	6, 8, 10, 12, 30, 32, 34, 36	
N12	7, 9, 11, 13, 31, 33, 35, 37	
N13	2, 3, 5, 7, 9, 11, 28, 31	
N14	6, 7, 10, 11, 30, 31, 34, 35	
P1	13	
P2	14	
P3	15	
P4	16	
P5	17	
P6	18	
P7	19	
P8	20	
P9	21	
P10	22	
P11	23	
P12	24	
C1	1	
C2	25	
C3	26	
C4	27	
C5	Not testable	

5.3.1.12.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	No EF selected		
	1- select DF _{TEST} , fid=1111 2- searchRecord()	2-shall throw uicc.access.UICC Exception with reason code	

ld	Description	API Expectation	APDU Expectation
2	Fixed linear EF,	•	•
_	Simple mode search forward		
	1- select EF _{LSEA} , fid=6F1A		
	2- mode = SIMPLE_SEARCH_START_FORWARD	2- no exception shall be thrown	
	recordNum = 1	Shall return 0.	
	patt[]= $\{0x10,0x03,0x04\}$	response shall be:	
	pattOffset = 0	response={0,0,0,0}	
	pattLength = 1	response={0,0,0,0}	
	<pre>response[] = {0,0,0,0} respOffset = 0</pre>		
	respLength = 4		
	searchRecord()		
	3- Simple mode search forward		
	mode = SIMPLE_SEARCH_START_FORWARD		
	recordNum = 2	0 01 11 1 0	
	$patt[] = \{0x10, 0x03, 0x04\}$	3- Shall return 2.	
	pattOffset = 1	response shall be:	
	<pre>pattLength = 2 resp.length = 4</pre>	response={0,2,4,0}	
	respOffset = 1		
	respLength = 3		
	searchRecord()		
3	Simple mode, search backward		
1	, , , , , , , , , , , , , , , , , , , ,		
	1- mode = SIMPLE_SEARCH_START_BACKWARD	1- shall return 0.	
	recordNum = 1	response shall be:	
	patt[]={0x08,0x0A,0x0B}	response={0,0,0,0}	
	pattOffset = 0	[0,0,0,0]	
	<pre>pattLength = 3 response[] = {0,0,0,0}</pre>		
	respOffset = 2		
	respLength = 2		
	searchRecord()		
	2-mode = SIMPLE_SEARCH_START_BACKWARD		
	recordNum = 6		
	patt[]={0x08,0x09,0x0A,0x0B}	2- shall return 3.	
	pattOffset = 1	response shall be:	
	<pre>pattLength = 2 response[] = {0,0,0,0}</pre>	response={0,4,3,1}	
	respOffset = 1	103001130=[0,4,5,1]	
	respLength = 3		
	searchRecord()		
4	Enhanced Mode, search backward from		
	previous record, start from an offset in		
	record.		
		1- shall return 1,	
	1- mode = ENHANCED_SEARCH	response shall be:	
	searchIndication= SEARCH INDICATION BACKWARD FROM PREVIOUS	resp={3,0,0,0}	
	search_indication_backward_from_previous + 0x0009		
	recordNum = 0		
	patt[]={0x01,0x02,0x03,0x04}		
	pattOffset = 0		
	pattLength = 3		
	response[] = {0,0,0,0}		
	respOffset = 0		
	<pre>respLength = 4 searchRecord()</pre>		
	2- mode = ENHANCED SEARCH		
	searchIndication=		
	SEARCH_INDICATION_BACKWARD_FROM_PREVIOUS	2- shall return 1	
	+0x0000	response shall be:	
	recordNum = 0	response={0,0,2,0}	
	patt[]={0x0C,0x0D,0x0E,0x0F,0x01,0x02}		
	<pre>pattOffset = 0 pattLength = 5</pre>		
	response[] = {0,0,0,0}		
	respOffset = 2		
	respLength = 2		
	searchRecord()		

ld	Description	API Expectation	APDU Expectation
5	Enhanced Mode, search backward from		
	previous record, start from a value in record.		
	1- mode = ENHANCED SEARCH	1- shall return 0,	
	searchIndication=		
	SEARCH_INDICATION_BACKWARD_FROM_PREVIOUS	response shall be:	
		resp={0,0,0,0}	
	recordNum = 0		
	patt[]= $\{0x01,0x02,0x03,0x04\}$		
	pattOffset = 0		
	pattLength = 3		
	response[] = {0,0,0,0}		
	respOffset = 0		
	respLength = 4		
	searchRecord()		
	2- perform 3 readRecord() in next mode		
	to set current pointer to pointer 5		
	3- mode = ENHANCED_SEARCH		
	searchIndication=		
	SEARCH_INDICATION_BACKWARD_FROM_PREVIOUS	3- shall return 2	
	+0x080E	response shall be:	
	recordNum = 0	response={4,2,0,0}	
	patt[]={0x01,0x02,0x03,0x04}	(1,=,0,0)	
	pattOffset = 3		
	pattLength = 1		
	response[] = {0,0,0,0}		
	respOffset = 0		
	respLength = 4		
6	searchRecord() Enhanced Mode, search backward from		
"	previous given record, start from an offset in		
	-		
	record.		
	1- mode = ENHANCED SEARCH	4 1 11 4	
	searchIndication=	1- shall return 1,	
	SEARCH INDICATION BACKWARD FROM PREVIOUS	response shall be:	
	GR + 0x0000	resp={1,0,0,0}	
	recordNum = 1		
Ì	patt[]={0x01,0x02,0x03}		
	pattOffset = 0		
	pattLength = 1		
	response[] = {0,0,0,0}		
	respOffset = 0		
	respLength = 4		
	searchRecord()		
	2- mode = ENHANCED_SEARCH		
	searchIndication=		
	SEARCH_INDICATION_BACKWARD_FROM_PREVIOUS	2- shall return 4	
	_GR + 0x0004	response shall be:	
	recordNum = 6	response={5,4,3,2}	
	patt[]={0x01,0x02,0x03}		
	pattOffset = 0		
	pattLength = 3		
	response[] = $\{0,0,0,0\}$		
	respOffset = 0		
	respLength = 4		
L	searchRecord()		

ld	Description	API Expectation	APDU Expectation
7	Enhanced Mode, search backward from		-
	previous given record, start from a value in		
	-		
	record.		
	1- mode = ENHANCED SEARCH	A shall nations A	
	searchIndication=	1- shall return 1,	
	SEARCH INDICATION BACKWARD FROM PREVIOUS	response shall be:	
	GR + 0x080D	resp={1,0,0,0}	
	recordNum = 1		
	patt[]={0x0E,0x0E,0x0E}		
	pattOffset = 1		
	pattLength = 1		
	response[] = {0,0,0,0}		
	respOffset = 0		
	respLength = 4		
	searchRecord()		
	2- mode = ENHANCED_SEARCH searchIndication=		
	SEARCH INDICATION BACKWARD FROM PREVIOUS	2- shall return 0	
	GR + 0x0800	response shall be:	
	recordNum = 6		
	patt[]={0x01,0x02,0x03}	response={0,0,0,0}	
	pattOffset = 0		
	pattLength = 3		
	response[] = {0,0,0,0}		
	respOffset = 0		
	respLength = 4		
	searchRecord()		
8	Enhanced Mode, search forward from next		
0			
	record, start from an offset in record.		
	1- mode = ENHANCED SEARCH		
	searchIndication=	1- shall return 2	
	SEARCH INDICATION FORWARD FROM NEXT +	response shall be:	
	0x0003	resp={0,0,3,4}	
	recordNum = 0		
	patt[]={0x00,0x0A,0x0B}		
	pattOffset = 1		
	pattLength = 2		
	response[] = {0,0,0}		
	respOffset = 2		
	respLength = 2		
	searchRecord()		
	2- Perform readRecord() in previous mode		
	3- mode = ENHANCED SEARCH		
	searchIndication=		
	SEARCH INDICATION FORWARD FROM NEXT +		
	0x0003	3- shall return 1	
	recordNum = 0		
	patt[]={0x00,0x0A,0x0B}	response shall be:	
	pattOffset = 1	response={4,0,0,0}	
	pattLength = 2		
	response[] = {0,0,0,0}		
	respOffset = 0		
	respLength = 4		
	searchRecord()		
	Dear cincecta (/		

ld	Description	API Expectation	APDU Expectation
9	Enhanced Mode, search forward from next		
	record, start from a value in record.		
	1- mode = ENHANCED_SEARCH searchIndication= SEARCH_INDICATION_FORWARD_FROM_NEXT + 0x0804 recordNum = 0 patt[]={0x01,0x02,0x03}	1- shall return 0, response shall be: resp={0,0,0,0}	
	<pre>patt()={0x0,0x02,0x03} pattOffset = 1 pattLength = 2 response[] = {0,0,0,0} respOffset = 2 respLength = 2 searchRecord() 2- mode = ENHANCED_SEARCH searchIndication=</pre>		
	SEARCH_INDICATION_FORWARD_FROM_NEXT + 0x0801 recordNum = 0 patt[] = {0x01,0x02,0x03} pattOffset = 2 pattLength = 1	2- shall return 2 response shall be: response={5,6,0,0}	
10	response[] = {0,0,0,0} respOffset = 0 respLength = 4 searchRecord() Enhanced Mode, search forward from next		
	given record, start from an offset in record.		
	1- mode = ENHANCED_SEARCH searchIndication= SEARCH_INDICATION_FORWARD_FROM_NEXT_GR + 0x0007	1- shall return 3, response shall be: resp={0,3,4,5}	
	<pre>recordNum = 1 patt[] = {0x01,0x02,0x03} pattOffset = 0 pattLength = 3 response[] = {0,0,0,0} respOffset = 1 respLength = 3 searchRecord() 2- mode = ENHANCED_SEARCH searchIndication=</pre>		
	<pre>SEARCH_INDICATION_FORWARD_FROM_NEXT_GR + 0x000C recordNum = 3 patt[] = {0x03,0x02,0x01} pattOffset = 0 pattLength = 3 response[] = {0,0,0,0} respOffset = 0</pre>	2- shall return 1 response shall be: response={6,0,0,0}	
	respLength = 4 searchRecord()		

ld	Description	API Expectation	APDU Expectation
11	Enhanced Mode, search forward from next	·	•
	given record, start from a value in record.		
	1 mode ENHANGED GEARGI		
	1- mode = ENHANCED_SEARCH searchIndication=	1- shall return 0,	
	SEARCH_INDICATION_FORWARD_FROM_NEXT_GR +	response shall be:	
	0x080D	resp={0,0,0,0}	
	recordNum = 5 patt[]={0x01,0x02,0x03}		
	pattOffset = 0		
	pattLength = 3		
	response[] = {0,0,0,0}		
	respOffset = 0 respLength = 4		
	searchRecord()		
	2- mode = ENHANCED_SEARCH		
	searchIndication=	2 abolt return 1	
	SEARCH_INDICATION_FORWARD_FROM_NEXT_GR + 0x080C	response shall be:	
	recordNum = 5	response={5,0,0,0}	
	patt[] = {0x01,0x02,0x03}	(0,0,0,0)	
	<pre>pattOffset = 0 pattLength = 3</pre>		
	response[] = {0,0,0,0}		
	respOffset = 0		
	respLength = 4		
40	searchRecord()		
12	Simple mode, total number of found patterns exceed response[]		
	oxecou respenseli		
	1- mode = SIMPLE_SEARCH_START_FORWARD	1- shall return 4	
	recordNum = 1 patt[]={0x01,0x02,0x03}	response shall be:	
	pattOffset = 0	response={1,2,3,4}	
	pattLength = 3		
	response[] = {0,0,0,0}		
	respOffset = 0 respLength = 4		
	searchRecord()		
	2 mode GIMDLE GEADGII GEADE EODWADD		
	2- mode = SIMPLE_SEARCH_START_FORWARD recordNum = 1		
	patt[]={0x01,0x02,0x03}		
	pattOffset = 0		
	<pre>pattLength = 3 response[] = {0,0,0,0,0}</pre>	2- shall return 4	
	respOffset = 0	response shall be: response={1,2,3,4,0}	
	respLength = 4	103901130={1,2,0,4,0}	
40	searchRecord()		
13	Invalid mode		
1	mode = 0x14 (simple search forward with	shall throw an uicc.access.UICC	
1	SFI)	Exception with reason code	
1	<pre>searchIndication= 0 recordNum = 2</pre>	INVALID_MODE.	
1	patt[]={0x01,0x02,0x03}		
	pattOffset = 1		
1	<pre>pattLength = 2 response[] = {0,0,0,0,0}</pre>		
1	response[] = {0,0,0,0,0}		
1	respLength = 2		
4.4	searchRecord()		
14	Pattern array is null		
1	mode = SIMPLE_SEARCH_START_FORWARD	shall throw an	
1	searchIndication= 0	java.lang.NullPointerException.	
	recordNum = 0 patt[] = null		
	pattOffset = 1		
1	pattLength = 2		
1	response[] = {0,0,0,0,0} respOffset = 2		
1	respLength = 2		
	searchRecord()		

ld	Description	API Expectation	APDU Expectation
15	Response array is null		
	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[] = {0x01,0x02,0x03} pattOffset = 0 pattLength = 1 response[] = null respOffset = 0 respLength = 5 searchRecord()</pre>	shall throw an instance of java.lang.NullPointerException.	
16	pattOffset<0		
10	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[]={0x01,0x02,0x03} pattOffset = -1 pattLength = 1 response[] = {0,0,0,0,0} respOffset = 0 respLength = 5 searchRecord()</pre>	shall throw an instance of java.lang.ArrayIndexOutOfBoundsExc eption.	
17	pattLength<0		
40	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[] = {0x01,0x02,0x03} pattOffset = 0 pattLength = -1 response[] = {0,0,0,0,0} respOffset = 0 respLength = 5 searchRecord()</pre>	shall throw an instance of java.lang.ArrayIndexOutOfBoundsExc eption.	
18	respOffset <0		
	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[] = {0x01,0x02,0x03} pattOffset = 0 pattLength = 1 response[] = {0,0,0,0,0} respOffset = -1 respLength = 5 searchRecord()</pre>	shall throw an instance of java.lang.ArrayIndexOutOfBoundsExc eption.	
29	respLength <0		
20	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[] = {0x01,0x02,0x03} pattOffset = 0 pattLength = 1 response[] = {0,0,0,0,0} respOffset = 0 respLength = -1 searchRecord()</pre> <pre>PattOffset + pattLength > patt[]</pre>	shall throw an instance of java.lang.ArrayIndexOutOfBoundsExc eption.	
20	PattOnset + pattLength > patt[]		
	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[]={0x01,0x02,0x03} pattOffset = 2 pattLength = 2 response[] = {0,0,0,0,0} respOffset = 1 respLength = 5 searchRecord()</pre>	shall throw an instance of java.lang.ArrayIndexOutOfBoundsExc eption.	

ld	Description	API Expectation	APDU Expectation
21	RespOffset + respLength > response[]	7.1.1 <u>— Apostuaio</u>	THE DO LABOURE
	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[] = {0x01,0x02,0x03} pattOffset = 0 pattLength = 1 response[] = {0,0,0,0,0} respOffset = 3 respLength = 3 searchRecord()</pre>	shall throw an instance of java.lang.ArrayIndexOutOfBoundsExc eption.	
22	recordNum < 0		
	<pre>mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = -1 patt[]={0x01,0x02,0x03} pattOffset = 0 pattLength = 1 response[] = {0,0,0,0,0} respOffset = 0 respLength = 5 searchRecord()</pre>	shall throw an uicc.access.UICC Exception with reason code RECORD_NOT_FOUND	
23	RecordNum > total number of file records		
	1- mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 7 patt[]={0x01,0x02,0x03} pattOffset = 0 pattLength = 1 response[] = {0,0,0,0,0} respOffset = 0 respLength = 5 searchRecord()	1- shall throw an uicc.access.UICC Exception with reason code RECORD_NOT_FOUND	
	2- mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 0 patt[] = {0x01,0x02,0x03} pattOffset = 0 pattLength = 1 response[] = {0,0,0,0,0} respOffset = 0 respLength = 5 searchRecord()	2- shall throw an uicc.access.UICC Exception with reason code RECORD_NOT_FOUND	
24	pattlength > record length		
	1- mode = SIMPLE_SEARCH_START_FORWARD searchIndication= 0 recordNum = 3 patt[16] = {0x55,0x55,,0x55} pattOffset = 0 pattLength = 16 response[] = {0,0,0,0,0} respOffset = 0 respLength = 5 searchRecord()	1- shall throw an uicc.access.UICCException with reason code OUT_OF_FILE_BOUNDARIES.	
	<pre>2- mode = ENHANCED_SEARCH searchIndication= SEARCH_INDICATION_FORWARD_FROM_NEXT_GR + 0x000E recordNum = 3 patt[]={0x01,0x02,0x03} pattOffset = 0 pattLength = 3 response[] = {0,0,0,0,0} respOffset = 0 respLength = 5 searchRecord()</pre>	2- shall throw an uicc.access.UICCException with reason code OUT_OF_FILE_BOUNDARIES.	

ld	Description	API Expectation	APDU Expectation
25	Wrong file structure		
	3		
	1- select EF _{TDAC} , fid=6F0F		
	2- searchRecord()	2- shall throw an	
		uicc.access.UICCException with	
		reason code	
		COMMAND_INCOMPATIBLE	
26	Courity status not satisfied	COMMAND_INCOMPATIBLE	
20	Security status not satisfied		
	1- select EF _{LNR} , fid=6F0A		
	2- searchRecord()	0	
		2- shall throw an	
		uicc.access.UICCException with	
		reason code	
		SECURITY_STATUS_NOT_SATISFI	
		ED	
27	File deactivated		
	1- select EF _{LARU} , fid=6F10		
	2- deactivateFile EFLARU		
	3- searchRecord()		
	4- activateFile()	3- shall throw an	
		uicc.access.UICCException with	
		reason code DATA_INVALIDATED	
28	Cyclic EF, Simple mode search forward		
	1- select EF _{CSEA} , fid=6F1B		
	2- mode = SIMPLE_SEARCH_START_FORWARD	2- shall return 0	
	recordNum = 1 patt[]={0x10,0x03,0x04}	response shall be:	
	pattOffset = 0	response={0,0,0,0,0}	
	pattLength = 1		
	response[] = {0,0,0,0,0}		
	respOffset = 0		
	respLength = 5		
	searchRecord()		
	3- mode = SIMPLE_SEARCH_START_FORWARD		
	recordNum = 2		
	patt[]={0x10,0x03,0x04}	3- Shall return 3.	
	pattOffset = 1		
	pattLength = 2	response shall be:	
	response[] = {0,0,0,0,0} respOffset = 2	response={0,0,2,4,1}	
	respLength = 3		
	searchRecord()		
	4- updateRecord() in previous mode with		
	value		
	{0x03,0x02,0x01,0x03,0x02,0x01,0x03,0x02		
	,0x01,0x03,0x02,0x01,0x03,0x02,0x01}		
	(new record 1 is set to previous record		
	6)		
	5- mode = SIMPLE_SEARCH_START_FORWARD recordNum = 2		
	patt[]={0x10,0x03,0x04}		
	pattOffset = 1		
	pattLength = 2	5- Shall return 3.	
	response[] = {0,0,0,0,0}	response shall be:	
	respOffset = 2	response={0,0,2,3,5}	
	respLength = 3		
29	searchRecord() Cyclic EF, Simple mode search backward		
29	Gyone Er, Simple mode Search backward		
	mode = SIMPLE SEARCH START BACKWARD	shall return 3	
	recordNum = 3	response shall be:	
	patt[]={0x10,0x03,0x04}		
	<pre>pattOffset = 1</pre>	response={0,3,2,5,0}	
	pattLength = 2		
	response[] = {0,0,0,0,0}		
	respOffset = 1 respLength = 4		
	resplength = 4 searchRecord()		
	2001 0111(COOL 0 (/	1	

ld	Description	API Expectation	APDU Expectation
30	Cyclic EF, Enhanced mode, search forward	711 Expostation	711 DO Expositation
	from next record, start from an offset in		
	record		
	mode = ENHANCED_MODE	shall return 3	
	<pre>searchIndication= SEARCH_INDICATION_START_FORWARD_FROM_NEX</pre>	response shall be:	
	T + 0x0009	response={0,0,4,5,6}	
	recordNum = 0		
	patt[]={0x01,0x02,0x03}		
	<pre>pattOffset = 0 pattLength = 3</pre>		
	response[] = {0,0,0,0,0}		
	respOffset = 2		
	respLength = 3		
31	searchRecord() Cyclic EF, Enhanced mode, search forward		
31	from next record, start from a value in		
	record		
	mode = ENHANCED_MODE	shall return 0	
	searchIndication= SEARCH INDICATION START FORWARD FROM NEX	response shall be:	
	T + 0x0810	response={0,0,0,0,0}	
	recordNum = 0		
	patt[] = {0x01,0x02,0x03}		
	<pre>pattOffset = 0 pattLength = 3</pre>		
	response[] = {0,0,0,0,0}		
	respOffset = 2		
	respLength = 3		
32	SearchRecord() Cyclic EF, Enhanced mode, search forward		
02	from next given record, start from an offset		
	in record		
	mode = ENHANCED_MODE	shall return 5	
	searchIndication= SEARCH INDICATION START FORWARD FROM NEX	response shall be:	
	T_GR + 0x0005	response={3,4,5,6,1}	
	recordNum = 3		
	<pre>patt[]={0x01,0x02,0x03} pattOffset = 0</pre>		
	pattLength = 1		
	response[] = {0,0,0,0,0}		
	respOffset = 0		
	respLength = 5 searchRecord()		
33	**		
	from next given record, start from a value in		
	record		
	1- mode = ENHANCED MODE	4. ab all rations O	
	searchIndication=	1- shall return 2	
	SEARCH_INDICATION_START_FORWARD_FROM_NEX	response shall be: response={2,4,0,0,0}	
	T_GR + 0x0805 recordNum = 6	1.00poi100={2,4,0,0,0}	
	patt[]={0x0E,0x0F,0x00}		
	pattOffset = 0		
	pattLength = 2		
	response[] = {0,0,0,0,0} respOffset = 0		
	respLength = 5		
	searchRecord()		
	2 Postoro EF initial state (massed 1		
	2- Restore EF initial state (record 1 shall be assigned to the record that		
	content is		
	{0x01,0x02,0x03,0x04,0x05,0x06,0x07,0x08		
	<pre>,0x09,0x0A, 0x0B,0x0C,0x0D,0xE,0x0F}) using 5 updateRecord() in previous mode</pre>		
	Taping a abaserecora() in biesions mode		

ld	Description	API Expectation	APDU Expectation
34	Cyclic EF, Enhanced mode, search	, a r Exposition	20 Expositation
•	backward from previous record, start from		
	an offset in record		
	1- Set current record pointer to record 6 using 5 readRecord() in next mode		
	2- mode = ENHANCED MODE		
	searchIndication=	2- shall return 1	
	SEARCH_INDICATION_START_BACKWARD_FROM_PR	response shall be:	
	EVIOUS + 0x0003 recordNum = 0	response={0,0,0,6,0}	
	recordNum = 0 patt[]={0x02,0x01,0x00}		
	pattOffset = 0		
	pattLength = 2		
	response[] = {0,0,0,0,0}		
	respOffset = 3		
	respLength = 2 searchRecord()		
35	Cyclic EF, Enhanced mode, search		
	backward from previous record, start from a		
	value in record		
	and a DMMANGED WORK		
	<pre>mode = ENHANCED_MODE searchIndication=</pre>	shall return 5	
	SEARCH_INDICATION_START_BACKWARD_FROM_PR	response shall be:	
	EVIOUS + 0x0801	response={5,4,3,2,1}	
	recordNum = 0		
	patt[]={0x01,0x02,0x03}		
	<pre>pattOffset = 1 pattLength = 2</pre>		
	response[] = {0,0,0,0,0}		
	respOffset = 0		
	respLength = 5		
	searchRecord()		
36	Cyclic EF, Enhanced mode, search		
	backward from given record, start from an offset in record		
	onset in record	 shall return 1	
	mode = ENHANCED MODE	response shall be:	
	searchIndication=	response={0,0,0,6,0}	
	SEARCH_INDICATION_START_BACKWARD_FROM_PR	response={0,0,0,0,0}	
	EVIOUS GR + 0x0003		
	recordNum = 5 patt[]={0x02,0x01,0x00}		
	pattOffset = 0		
	pattLength = 2		
	response[] = {0,0,0,0,0}		
	respOffset = 3 respLength = 2		
	searchRecord()		
37	Cyclic EF, Enhanced mode, search		
	backward from given record, start from a		
	value in record		
		shall return 5	
	<pre>mode = ENHANCED_MODE searchIndication=</pre>	response shall be:	
	searchindication= SEARCH INDICATION START BACKWARD FROM PR	response={3,2,1,5,4}	
	EVIOUS + 0x0801		
	recordNum = 3		
	patt[]={0x01,0x02,0x03}		
	pattOffset = 1		
	<pre>pattLength = 2 response[] = {0,0,0,0,0}</pre>		
	response[] = {0,0,0,0,0} respOffset = 0		
	respLength = 5		
	searchRecord()		

5.3.1.13 Method increase

Test Area Reference: Api_4_Afv_Incr.

5.3.1.13.1 Conformance requirement

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

5.3.1.13.1.1 Normal execution

- CRRN1: This method increases the current cyclic EF record.
- CRRN2: The response buffer will only contain the value of the increased record.

5.3.1.13.1.2 Parameter errors

- CRRP1: If the array incr is null, an instance of NullPointerException shall be thrown.
- CRRP2: If the array resp is null, an instance of NullPointerException shall be thrown.
- CRRP3: If incrOffset is negative, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP4: If incrLength is negative, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP5: If respOffset is negative, an instance of ArrayIndexOutOfBoundsExceptoin shall be thrown.
- CRRP6: If incrOffset plus incrLength, is greater than the length of array incr, an instance of ArrayIndexOutOfBoundsException shall be thrown and no increase is performed.
- CRRP7: If respOffset is greater than the length of array resp, an instance of ArrayIndexOutOfboundsException shall be thrown.
- CRRP8: 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 UICCException shall be thrown. The reason code shall be UICCException.MAX_VALUE_REACHED.
- CRRP9: If incrLength is greater than 127, and exception shall be thrown.

5.3.1.13.1.3 Context errors

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

- CRRC6: If the currently selected EF is invalidated, an instance of UICCException shall be thrown. The reason code shall be UICCException.REF_DATA_INVALIDATED.
- CRRC7: If the currently selected cyclic EF has no record, an instance of UICCException shall be thrown. The reason code shall be UICCException.NO_RECORD_FOUND.

5.3.1.13.2 Test areafiles

Test Source: Test_Api_4_Afv_Incr.java.

Test Applet: Api_4_Afv_Incr_1.java.

Cap File: Api_4_Afv_incr.cap.

5.3.1.13.3 Test coverage

CRR number	Test case number	
N1	1, 2, 3, 15	
N2	2, 3, 15	
P1	4	
P2	9	
P3	6	
P4	5	
P5	10	
P6	7	
P7	11	
P8	8	
P9	15	
C1	1	
C2	Not testable	
C3	Not testable	
C4	12	
C5	13	
C6	14	
C7	Not testable	

5.3.1.13.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	No EF selected		
	1- select DF _{TEST} fid=1111 2- byte[] incr = new byte[4] byte[] resp = new byte[4] incrOffset = 0 incrLength = 2 respOffset = 0 increase()	2- An UICCException.NO_EF_SEL ECTED should be thrown	

ld	Description	API Expectation	APDU Expectation
2	increase , verify response		•
	1- select EF _{CARU} , fid=6F09 set the record pointer with readRecord() in PREVIOUS mode 2-//Set both record to 00 00 00 mode = REC_ACC_MODE_PREVIOUS data[] = {0x00,0x00,0x00} recOffset = 0 dataOffset = 0 dataLength = 3 updateRecord() //update Record 1 updateRecord() //update Record 2 3- incr[] = {0x00,0x00,0x01} incrOffset = 0 incrLength = 3 resp.length = 4 respOffset = 0 ret = 3 increase()	3- resp[] = {0x00,0x00,0x01,0x00}	
3	increase, verify file		
	<pre>1- incr[] = {0x00,0x00,0x00,0x02} incrOffset = 1 incrLength = 3 resp.length = 4 respOffset = 1</pre>	1- resp[] = {0x00,0x00,0x00,0x03}	
	<pre>increase() 2- resp[] = {0x00,0x00,0x00,0x00} recNumber = 0 mode = REC_ACC_MODE_ABSOLUTE_CURRENT recOffset = 0 resp.length = 4 respOffset = 0 respLength = 3 readRecord()</pre>	2- resp[] = {0x00,0x00,0x03,0x00}	
4	<pre>incr[] is null incr[] = null incrOffset = 0 incrLength = 1</pre>	Shall throw java.lang.NullPointerExceptio n.	
	resp.length = 4		
	respOffset = 0 increase()		
5	incrLength< 0		
	<pre>incr.length = 4 incrOffset = 0 incrLength = -1 resp.length = 4 respOffset = 0 increase()</pre>	Shall throw java.lang. ArrayIndexOutOfBoundsExc eption.	
6	incrOffset < 0	Chall throw	
	<pre>incr.length = 4 incrOffset = -1 incrLength = 1 resp.length = 4 respOffset = 0 increase()</pre>	Shall throw java.lang. ArrayIndexOutOfBoundsExc eption.	
7	IncrOffset + incrLength > incr.length	Chall throw	
	<pre>incr.length = 4 incrOffset = 1 incLength = 4resp.length = 4 respOffset = 0 increase()</pre>	Shall throw java.lang. ArrayIndexOutOfBoundsExc eption.	

ld	Description	API Expectation	APDU Expectation
8	Reach Maximum Value		•
	1- incr[0:3] = 0xFF	1- Shall throw	
	<pre>incrOffset = 0 incrLength = 3</pre>	uicc.access.UICCException	
	resp.length = 4	with reason code	
	respOffset = 0	MAX_VALUE_REACHED.	
	increase()		
	2- //Set both record to FF FF FF	2- Shall throw	
	<pre>mode = REC_ACC_MODE_PREVIOUS data[] = {0xFF,0xFF,0xFF}</pre>	uicc.access.UICCException	
	recOffset = 0	with reason code	
	dataOffset = 0	MAX_VALUE_REACHED.	
	dataLength = 3		
	updateRecord() //update Record 1		
	updateRecord() //update Record 2		
	$[3-incr[] = \{0x00,0x00,0x01\}$		
	incrOffset = 0		
	incrLength = 3		
	resp.length = 4		
	respOffset = 0		
9	increase() resp[] is null		
9	resμ[] is iiuii	Shall throw	
	incr.length = 4	java.lang.	
	incrOffset = 0	ArrayIndexOutOfBoundsExc	
	incrLength = 1	eption.	
	resp[] = null	Cption:	
	<pre>respOffset = 0 increase()</pre>		
10	respOffset < 0		
'	i doponiosi 40	Shall throw	
	incr.length = 4	java.lang.	
	incrOffset = 0	ArrayIndexOutOfBoundsExc	
	incrLength = 1	eption.	
	resp.length = 4 respOffset = -1	'	
	increase()		
11	respOffset + recordLength > resp.length		
		Shall throw	
	incr.length = 4	java.lang.	
	<pre>incrOffset = 0 incrLength = 3</pre>	ArrayIndexOutOfBoundsExc	
	resp.length = 3	eption.	
	respOffset = 2		
	increase()		
12	EF is not Cyclic		
	1- select EF _{TARU} fid= 6F03	O. Challaharra	
	2- incr.length= 3	2 - Shall throw	
	incrOffset = 0	uicc.access.UICCException	
	incrLength = 3	with reason code	
	resp.length = 3	COMMAND_INCOMPATIBL E.	
	<pre>respOffset = 0 increase()</pre>	L.	
	3 - select EF _{LARU} , fid=6F0C		
	4 - incr.length= 3	4 - Shall throw	
	incrOffset = 0	uicc.access.UICCException	
	incrLength = 3	with reason code	
	resp.length = 3 respOffset = 0	COMMAND_INCOMPATIBL	
	increase()	E.	
13	Access condition not fulfilled		
	1- select EF _{CNIC} , fid=6F06	2 - Shall throw	
	2- incr.length= 3 incrOffset = 0	uicc.access.UICCException	
	<pre>incrollset = 0 incrLength = 3</pre>	with reason code	
	resp.length = 3	SECURITY_STATUS_NOT_	
	respOffset = 0	SATISFIED.	
	increase()		

ld	Description	API Expectation	APDU Expectation
14	<pre>EF is invalidated 1-select EF_{CARU}, fid=6F09 2 - invalidate() 3 - incr.length= 3 incrOffset = 0 incrLength = 3 resp.length = 3 respOffset = 0 increase() 4 - rehabilitate() 5- Restore initial content of EF_{CARU}</pre>	3 - Shall throw uicc.access.UICCException with reason code REF_DATA_INVALIDATED	
15	<pre>incrLength out of range 1- Create an EF Cyclic with 1 record of 0x7F length, fid=0x2C7F 2- Select EF Cyclic, fid=0x2C7F 3- Set record to following value rec[0] = 0; rec[1126] = 0xFF with an update record. 4- incr.length=128 incrOffset = 1 incrLength = 127 resp.length = 255 respOffset = 0 Incr[] initialized to = {0x00, ,0x00,0x01} respOffset = 0 ret = 0x7F increase() 5- incr.length=128 incrOffset = 0 incrLength = 128 resp.length = 255 respOffset = 0 Incr[] initialized to 0 respOffset = 0 Incr[] initialized to 0 respOffset = 0 increase()</pre>	4- resp[0126] = {0x01,0x00,0x00,,0x00} 5- Shall throw an exception	

5.3.1.14 Method deactivateFile

Test Area Reference: Api_4_Afv_Dacf.

5.3.1.14.1 Conformance requirement

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

5.3.1.14.1.1 Normal execution

• CRRN1: The currently selected EF of the calling applet shall be deactivated, as defined in ETSI TS 102 222 [7].

5.3.1.14.1.2 Parameter errors

No requirements.

5.3.1.14.1.3 Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.NO_EF_SELECTED.
- CRRC2: If the calling applet does not fulfil the access condition, activate, to perform this function, an instance of UICCException shall be thrown. The reason code shall be UICCException.SECURITY_STATUS_NOT_SATISFIED.
- CCRC3: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.3.1.14.2 Test area files

Test Sourec: Test_Api_4_Afv_Dacf.java.

Test Applet: Api_4_Afv_Dacf_1.java.

Cap File: Api_4_Afv_dacf.cap.

5.3.1.14.3 Test coverage

CRR number	Test case number
N1	2, 3
C1	1
C2	4
C3	Not testable

5.3.1.14.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Test applet is installed with no access		
	right on Application Pin2		
1	No EF is selected		
	1- select DF _{TEST} fid=1111	2- An UICCException	
	2- call deactivateFile()	NO_EF_SELECTED is	
		thrown	
2	Deactivate activated File		
	0- Select root directory		
	1- Select EF _{UICC} fid=2FF0	2- No Exception shall be	
	2- ReadBinary EF _{UICC}	thrown	
	3- Deactivate EF _{UICC} 4- ReadBinary EF _{UICC}	4-	
	4- ReadBillary Eruico	UICCException.REF_DATA_	
		INVALIDATED is thrown	
3	Deactivate deactivated File		
	1- deactivateFile EF _{UICC}	1- No Exception shall be	
	2- activateFile EF _{UICC}	thrown	
4	Access condition not fulfilled		
	1- select DF _{TEST} fid=1111		
	2- select EF _{LADA} fid=6F15		
	3- deactivateFile EFLADA		
	- Laura	3- An UICCException	
		SECURITY_STATUS_NOT_	
		SATISFIED is thrown	

5.3.1.15 Method activateFile

Test Area Reference: Api_4_Afv_Actf.

5.3.1.15.1 Conformance requirement

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

5.3.1.15.1.1 Normal execution

CRRN1: The currently selected EF of the calling applet shall be activated, as defined in ETSI TS 102 222 [7].

5.3.1.15.1.2 Parameter errors

No requirements.

5.3.1.15.1.3 Context errors

- CRRC1: If the calling applet has currently no EF selected, an instance of UICCException shall be thrown. The reason code shall be UICCException.NO_EF_SELECTED.
- CRRC2: If the calling applet does not fulfil the access condition, activate, to perform this function, an instance of UICCException shall be thrown. The reason code shall be UICCException.SECURITY_STATUS_NOT_SATISFIED.
- CRRC3: If the method call causes an error to occur that is not expected and thus not handled, an instance of UICCException shall be thrown. The reason code shall be UICCException.INTERNAL_ERROR.

5.3.1.15.2 Test area files

Test Source: Test_Api_4_Afv_Actf.java.

Test Applet: Api_4_Afv_Actf_1.java.

Cap File: Api_4_Afv_actf.cap.

5.3.1.15.3 Test coverage

CRR number	Test case number
N1	2, 3
C1	1
C2	4
C3	Not testable

5.3.1.15.4 Test procedure

ld	Description	API Expectation	APDU Expectation
0	Test applet is installed with no access right on Application Pin2		
1	No EF is selected		
	1- Select DF _{TEST} fid=1111 2- Call activateFile()	2- A UICCException NO_EF_SELECTED is thrown	
2	Activate deactivated File 0- Select Root directory 1- Select EFunc fid=2FF0		
	2- ReadBinary EF _{UICC} 3- Deactivate EF _{UICC} 4- ReadBinary EF _{UICC} 5 -ActivateFile EF _{UICC}	2- No Exception shall be thrown 4- UICCException.REF_DATA_INVALIDATED is thrown	
	6- ReadBinary EF _{UICC}	6- No Exception shall be thrown	

ld	Description	API Expectation	APDU Expectation
3	Activate activated File		
	ActiveFile EF _{UICC}	No Exception shall be thrown	
4	Access condition not fulfilled		
	1- Select DF _{TEST} fid=1111 2- Select EF _{LADA} fid=6F15 3- ActivateFile EF _{LADA}	3- A UICCException SECURITY_STATUS_NOT_SATISFIED is thrown	

5.3.2 Class AdminFileViewBuilder

5.3.2.1 Method getTheUICCAdminFileView

Test Area Reference: Api_4_Afb_Gtafb.

5.3.2.1.1 Conformance requirement

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

5.3.2.1.1.1 Normal execution

- CRRN1: returns a reference to class which implements the FileView interface on the UICC file system.
- CRRN2: return null if one of the javacard.framework.Applet.register(..) method has not previously invoked by the applet invoking this method or the filesystem server returns null.
- CRRN3: It is not possible to get access to files which are located under any ADF with this FileView.
- CRRN4: After a successful invocation of the method, the MF is the current selected file.
- CRRN5: A separate and independent file context shall be associated with each and every FileView object: the
 operation performed on files in a given FileView object shall not affect the file context associated with any
 other FileView object. This context can be transient or persistent depending on what was required by the
 Applet during the creation of the FileView object.

5.3.2.1.1.2 Parameter errors

• CRRP1: If event is not one of the following values JCSystem.NOT_A_TRANSIENT_OBJECT, JCSystem.CLEAR_ON_DESELECT, or JCSystem.CLEAR_ON_RESET a SystemException is thrown. The value of the SystemException shall be SystemException.ILLEGAL_VALUE.

5.3.2.1.1.3 Context errors

- CRRC1: If event is JCSystem.CLEAR_ON_RESET or JCSystem.CLEAR_ON_DESELECT and not enough transient memory space is available a SystemException shall be thrown with reason code SystemException.NO_TRANSIENT_SPACE.
- CRRC2: If event is JCSystem.CLEAR_ON_DESELECT and the applet is not a currently selected applet a SystemException with reason code SystemException.ILLEGAL_TRANSIENT shall be thrown.

5.3.2.1.2 Test area files

 $Test\ Source: \qquad Test_\ Api_4_Afb_Gtafb.java.$

Test Applet: Api_4_Afb_Gtafb_1.java.

Cap File: Api_4_Afb_Gtafb.cap.

5.3.2.1.3 Test coverage

CRR number	Test case number
N1	2
N2	1
N3	2
N4	2
N5	3
P1	7
C1	5, 6
	Testable only if available transient space is lower than 32767
C2	4

5.3.2.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Method returns null	-	•
	Install Applet1 with full access rights on the UICC file system		
	Invoke the method getTheUICCView before the javacard.framework.Applet.register() method invocation	returns null	
2	Normal execution		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	Invoke the method getTheUICCView() with the event JCSystem.NOT_A_TRANSIENT_OBJECT and stores the result in a class variable FV1	No exception shall be thrown	
	Applet1 calls status() command	Current selected DF is the MF	
	Select DF_{Test} using FV1 Select EF_{TARU} using FV1 Read first 3 bytes using FV1	Expected value is {FF FF FF}	
	Reset Terminal profile		
	2- Envelope menu selection is sent to the UICC	2- Applet1 is triggered	
	0100	Current selected DF is DF _{Test}	
	Applet1 calls FV1.status() command	UICCException.FILE_NOT_FOU	
	Applet1 calls FV1.select(0x7FFF)	ND is thrown	
	Invoke the method getTheUICCView() with the event JCSystem.CLEAR_ON_RESET and stores the result in a class variable FV2	No exception shall be thrown	
	Applet1 calls FV2.status() command	Current selected DF the MF	
	Select DF _{Test} using FV2		
	Select EF _{TARU} using FV2 Read first 3 bytes using FV2	Expected value is {FF FF FF}	
	Reset		

ld	Description	API Expectation	APDU Expectation
	Terminal profile		
	4 - Envelope menu selection is sent to the UICC	4- Applet1 is triggered	
	Applet1 calls status() command	Current selected DF is the MF	
	Applet1 calls select(0x7FFF)	UICCException.FILE_NOT_FOU ND is thrown	
	5- Select the Applet by AID	5- Applet1 is selected	
	Invoke the method in the method process() getTheUICCView() with the event JCSystem.CLEAR_ON_DESELECT and stores the result in a class variable	No exception shall be thrown	
	Applet1 calls status() command	Current selected DF the MF	
	Select DF _{Test} using FV3 Select EF _{TARU} using FV3		
	Read first 3 bytes using FV3 Select ADF2 by AID	Expected value is {FF FF FF}	
	6- Select the Applet by AID	6- Applet1 is selected	
	Applet1 calls status() command	Current selected DF is the MF UICCException.FILE_NOT_FOU	
	Applet1 calls select(0x7FFF)	ND is thrown	
3	Fileview context independency		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- Check that previous fileviews are different (FV1 != FV2 != FV3)		
	3- Select $\mathrm{DF_{Test}/EF_{LARU}}$ using FV1	3- No exception shall be thrown	
	4- Select $\mathrm{DF_{Test}/EF_{CARU}}$ using FV2	4- No exception shall be thrown	
	5- Select DF _{Test} /EF _{CARU} using FV3	5- An exception is thrown	
	6- Read record number 1 using FV1 (in absolute mode)	6- Expected value is "55 55 55"	
	7- Read record number 2 using FV2 (in absolute mode)	7- Expected value is "AA AA AA"	
4	ILLEGAL_TRANSIENT SystemException		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 calls getTheUICCView() method with the event JCSystem. CLEAR_ON_DESELECT	2- SystemException. ILLEGAL_TRANSIENT is thrown	

ld	Description	API Expectation	APDU Expectation
5	NO_TRANSIENT_SPACESystemException with CLEAR_ON_RESET Fileview object		
	1- Get the available transient memory space using method	1- No exception shall be thrown	
	<pre>length=JCSystem.getAvailableMemory(MEMORY_TY PE_TRANSIENT_RESET)</pre>		
	2- If length < 32767, (test case could be performed) 2.1- Fill the available transient memory space by creating array, using method JCSystem.makeTransientByteArray(length, JCSystem.CLEAR_ON_RESET)	2.1- No exception shall be thrown	
	2.2- Applet calls method getTheUICCView() with event JCSystem.CLEAR_ON_RESET 4- Reset	2.2- SystemException. NO_TRANSIENT_SPACE is thrown	
6	NO_TRANSIENT_SPACE SystemException		
	with CLEAR_ON_DESELECT Fileview object		
	1- Select the Applet by AID 2- Get the available transient memory space	1- Applet1 is selected	
	using method length=JCSystem.getAvailableMemory(MEMORY_TY PE_TRANSIENT_DESELECT)	2- No exception shall be thrown	
	3- If length < 32767, (test case could be performed) 3.1- Fill the available transient memory	3.1- No exception shall be	
	space by creating array, using method JCSystem.makeTransientByteArray(length, JCSystem.CLEAR_ON_DESELECT)	thrown	
	3.2- Applet calls method getTheUICCView() with event		
	JCSystem.CLEAR_ON_DESELECT	3.2- SystemException. NO_TRANSIENT_SPACE is	
7	ILLEGAL_VALUE SystemException	thrown	
'			
	<pre>Invoke the method getTheUICCView() with every event codes except 0,1,2</pre>	1- SystemException.ILLEGAL_VAL UE is thrown	
	I.		

5.3.2.2 Method getTheAdminFileView(javacard.framework.AID aid, byte event)

Test Area Reference: Api_4_Afb_Gtafob.

5.3.2.2.1 Conformance requirement:

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

5.3.2.2.1.1 Normal execution

- CRRN1: returns a reference to class which implements the AdminFileView interface on an ADF file system defined by is AID.
- CRRN2: returns null if the ADF with the AID does not exist.

- CRRN3: returns null if one of the javacard.framework.Applet.register(..) method has not previously invoked by the applet invoking this method or the filesystem server does not exist or the filesystem server returns null.
- CRRN4: After a successful invocation of the method the ADF is the currently selected file.
- CRRN5: A separate and independent file context shall be associated with each and every AdminFileView object: the operation performed on files in a given AdminFileView object shall not affect the file context associated with any other AdminFileView object. This context can be transient or persistent depending on what was required by the Applet during the creation of the AdminFileView object.
- CRRN6: It is not possible to access files which are not located under the ADF.

5.3.2.2.1.2 Parameter errors

- CRRP1: If event is not one of the following values JCSystem.NOT_A_TRANSIENT_OBJECT, JCSystem.CLEAR_ON_DESELECT, or JCSystem.CLEAR_ON_RESET a SystemException is thrown. The value of the SystemException shall be SystemException.ILLEGAL_VALUE.
- CRRP2: If the AID is null a NullPointerException shall be thrown.

5.3.2.2.1.3 Context errors

- CRRC1: If event is JCSystem.CLEAR_ON_RESET or JCSystem.CLEAR_ON_DESELECT and not enough transient memory space is available a SystemException shall be thrown with reason code SystemException.NO_TRANSIENT_SPACE.
- CRRC2: If event is JCSystem.CLEAR_ON_DESELECT and the applet is not a currently selected applet a SystemException with reason code SystemException.ILLEGAL_TRANSIENT shall be thrown.

5.3.2.2.2 Test area files

Test Source: Test_Api_4_Afb_Gtafob.java.

Test Applet: Api_4_Afb_Gtafob.java.

Cap File: Api_4_Afb_Gtafob.cap.

5.3.2.2.3 Test coverage

CRR number	Test case number
N1	1 to 3
N2	1
N3	1
N4	2
N5	3
N6	2
P1	7
P2	8
C1	5, 6
	Testable only if available transient space is lower than 32767
C2	4

5.3.2.2.4 Test procedure

on to 2-12 before java	Description Method returns null Install Applet1 with full access rights the UICC file system Invoke the method getTheAdminFileView ore the acard.framework.Applet.register() and invocation Envelope menu selection is sent to the	API Expectation 2- returns null	APDU Expectation
on to 2-12 before java	Invoke the method getTheAdminFileView ore the acard.framework.Applet.register() nod invocation Envelope menu selection is sent to the		
befo java meth	ore the acard.framework.Applet.register() and invocation Envelope menu selection is sent to the	2- returns null	
3 - 1			
UIC		3- applet is triggered	
with	Invoke the method getTheAdminFileView() n AID = unknown ADF AID	4- returns null	
2 1- H	Normal execution Envelope menu selection is sent to the	1- Applet1 is triggered	
with JCS	oke the method getTheAdminFileView() n AID = ADF1 with the event ystem.NOT_A_TRANSIENT_OBJECT stores the result in a class variable	No Exception shall be thrown	
Appl	Let1 calls FV1.status() command	Current selected DF is ADF1	
usir	ect DFTest using FV1 Select EFTARU ng FV1Read first 3 bytes using FV1	Expected value is {FF FF FF}	
Rese	et minal profile		
2 - UICO	Envelope menu selection is sent to the	2- Applet1 is triggered	
Appl	let1 calls FV1.status() command	Current selected DF is DF _{Test}	
Read	d first 3 bytes using FV1	Expected value is {FF FF FF}	
Appl	Let1 calls FV1.select(EFRFU1)	UICCExceptionUICCException.FIL E_NOT_FOUND is thrown	
with	oke the method getTheAdminFileView() on the event JCSystem.CLEAR_ON_RESET and res the result in a class variable FV2	No exception shall be thrown	
Appl	let1 calls FV2.status() command	Current selected DF is the ADF1	
Sele Read Rese		Expected value is {FF FF FF}	
	minal profile Envelope menu selection is sent to the	4- Applet1 is triggered	
0100	C Let1 calls FV2.status() command	Current selected DF is the ADF1	
		LUCOF	
Read	d first 3 bytes using FV2	UICCException. NO_EF_SELECTED	
Appl	let1 calls FV2.select(EFRFU1)	UICCException.FILE_NOT_FOUN D is thrown	
Invo	Select the Applet by AID bke the method getTheAdminFileView() a AID = ADF1 with the event:	5- Applet1 is selected	

ld	Description	API Expectation	APDU Expectation
	JCSystem.CLEAR_ON_DESELECT and stores the	No Exception shall be thrown	,
	result in a class variable FV3	Current selected DF is ADF1	
	Applet1 calls FV3.status() command Select DFTest using FV3 Select EFTARU	Current selected DF is ADF i	
	using FV3 Read first 3 bytes using FV3	Expected value is {FF FF FF}	
	6- Select the Applet by AID	6- Applet1 is selected	
	Applet1 calls FV3.status() command	Current selected DF is ADF1	
	Read first 3 bytes using FV3	UICCException.NO_EF_SELECTE D shall be thrown	
	Applet1 calls FV3.select(EFRFU1)	UICCException.FILE_NOT_FOUN D shall be thrown	
3	FileView context independency		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- Check that previous fileviews are different (FV1 != FV2 != FV3)		
	3- Select DFTest/EFLARU using FV1	3- No exception shall be thrown	
	4- Select DFTest/EFCARU using FV2	4- No exception shall be thrown	
	5- Select DFTest/EFCARU using FV3	5- An exception shall be thrown	
	6- Read record number 1 using FV1 (in absolute mode)	6- Expected value is "55 55 55 55"	
	7- Read record number 2 using FV2 (in absolute mode)	7- Expected value is "AA AA AA"	
4	ILLEGAL_TRANSIENT SystemException		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 calls qetTheAdminFileView()	2- SystemException.	
	method with the event JCSystem.CLEAR ON DESELECT	ILLEGAL_TRANSIENT is thrown	
5	NO_TRANSIENT_SPACE SystemException with CLEAR_ON_RESET FileView object		
	1 Get the available transient memory	1- No Exception shall be thrown	
	<pre>space using method length = JCSystem.getAvailableMemory(MEMORY_TYPE_TR ANSIENT_RESET)</pre>		
	2- If length < 32767, (test case could be		
	performed) 2.1- Fill the available transient memory	2.1- No Exception shall be thrown	
	space by creating array, using method JCSystem.makeTransientByteArray(length,		
	JCSystem.CLEAR_ON_RESET)	2.2- SystemException.NO_TRANSIENT	
	2.2- Applet calls method	_SPACE is thrown	
	<pre>getTheAdminFileView() with AID = ADF1 with event</pre>		
	JCSystem.CLEAR_ON_RESET		

ld	Description	API Expectation	APDU Expectation
6	NO_TRANSIENT_SPACE SystemException with CLEAR_ON_DESELECT FileView object		
	1 - Select the Applet by AID	1- Applet1 is triggered	
	<pre>2- Get the available transient memory space using method length = JCSystem.getAvailableMemory(MEMORY_TYPE_TR ANSIENT_DESELECT)</pre>	2- No Exception shall be thrown	
	3- If length < 32767, (test case could be performed) 3.1- Fill the available transient memory space by creating array, using method JCSystem.makeTransientByteArray(length,	3.1- No Exception shall be thrown	
	JCSystem.CLEAR_ON_DESELECT) } 3.2- Applet calls method getTheAdminFileView() with AID = ADF1 with event: JCSystem.CLEAR_ON_DESELECT	3.2- SystemException. NO_TRANSIENT_SPACE is thrown	
	4- Reset		
7	ILLEGAL_VALUE SystemException		
	1- Invoke the method getTheAdminFileView() with every event codes except: 0, 1, 2	1- SystemException.ILLEGAL_VALU E is thrown	
8	NullPointerException		
	<pre>Invoke the method getTheAdminFileView() with AID = NULL with event: 1 - JCSystem.CLEAR_ON_RESET</pre>	1- Shall be thrown	
		java.lang.NullPointerException	

5.3.2.3 Method getTheAdminFileView(byte[] buffer, short bOffset, short bLength, byte event)

Test Area Reference: Api_4_Afb_Gtaf_Bsbb.

5.3.2.3.1 Conformance requirement:

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

public static AdminFileView getTheAdminFileView(byte[] buffer, short bOffset, short bLength, byte
event)

throws NullPointerException,
 javacard.framework.SystemException,
 ArrayIndexOutOfBoundException

5.3.2.3.1.1 Normal execution

- CRRN1: returns a reference to class which implements the AdminFileView interface on an ADF file system defined by its AID.
- CRRN2: returns null if the ADF with the full AID given in the buffer does not exist.
- CRRN3: returns null if one of the javacard.framework.Applet.register(..) method has not previously invoked by the applet invoking this method or the filesystem server does not exist or the filesystem server returns null.
- CRRN4: After a successful invocation of the method the ADF is the currently selected file.

- CRRN5: A separate and independent file context shall be associated with each and every AdminFileView object: the operation performed on files in a given FileView object shall not affect the file context associated with any other AdminFileView object. This context can be transient or persistent depending on what was required by the Applet during the creation of the AdminFileView object.
- CRRN6: It is not possible to access files which are not located under the ADF.

5.3.2.3.1.2 Parameters error

- CRRP1: If event is not one of the following values JCSystem.NOT_A_TRANSIENT_OBJECT, JCSystem.CLEAR_ON_DESELECT, or JCSystem.CLEAR_ON_RESET a SystemException is thrown. The value of the SystemException shall be SystemException.ILLEGAL VALUE.
- CRRP2: If the buffer is null a NullPointerException shall be thrown.
- CRRP3: if bLength is less then 0, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP4: if bOffset plus bLength is greater than the length of the array buffer.length, an instance of ArrayIndexOutOfBoundsException shall be thrown.
- CRRP5: if bLength is not in the range of 5 16 bytes a SystemException.ILLEGAL_VALUE shall be thrown.

5.3.2.3.1.3 Context errors

- CRRC1: If event is JCSystem.CLEAR_ON_RESET or JCSystem.CLEAR_ON_DESELECT and not enough transient memory space is available a SystemException shall be thrown with reason code SystemException.NO_TRANSIENT_SPACE.
- CRRC2: If event is JCSystem.CLEAR_ON_DESELECT and the applet is not a currently selected applet a SystemException with reason code SystemException.ILLEGAL_TRANSIENT shall be thrown.

5.3.2.3.2 Test area files

Test Source: Test_Api_4_Afb_Gtaf_Bsbb.java.

Test Applet: Api_4_Afb_Gtaf_Bsbb.java.

Cap File: Api_4_Afb_Gtaf_Bsbb.cap.

5.3.2.3.3 Test coverage

CRR number	Test case number
N1	2
N2	3
N3	1
N4	2
N5	11, 12
N6	5
P1	2
P2	5
P3	7
P4	8
P5	9
C1	11, 12
	Testable only if available transient space is lower than 32767
C2	6

5.3.2.3.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Method returns null	· ·	
	1- Install Applet1 with full access rights on the UICC file system		
	2- Invoke the method getTheFileView before the javacard.framework.Applet.register() method invocation Invoke the method getTheAdminFileView() with buffer[20] = {ADF1,} bOffset= 0 bLength= 16	2- returns null	
	3- Envelope menu selection is sent to the UICC	3- Applet is triggered	
	4- Invoke the method getTheAdminFileView before the javacard.framework.Applet.register() method invocation Invoke the method getTheAdminFileView() with buffer[] = unknown aid	4- returns null	
2	Normal execution		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	<pre>Invoke the method getTheAdminFileView() with buffer[20] = {ADF1,} boffset= 0 bLength= 16</pre>	No Exception shall be thrown	
	JCSystem.NOT_A_TRANSIENT_OBJECT and stores the result in a class variable FV1		
	Applet1 calls FV1.status() command	Current selected DF is ADF1	
	Select DFTest using FV1 Select EFTARU using FV1 Read first 3 bytes using FV1 Reset Terminal profile	Expected value is {FF FF FF}	
	2 - Envelope menu selection is sent to the UICC	2- Applet1 is triggered	
	Applet1 calls FV1.status() command	Current selected DF is DFTest	
	Read first 3 bytes using FV1	Expected value is {FF FF FF}	
	Applet1 calls FV1.select(EFRFU1)	UICCExceptionUICCException.FIL E_NOT_FOUND is thrown	
	Invoke the method getTheAdminFileView() with the event JCSystem.CLEAR_ON_RESET and stores the result in a class variable FV2	No exception shall be thrown	
	Applet1 calls FV2.status() command	Current selected DF is ADF1	
	Select DFTest using FV2 Select EFTARU using FV2 Read first 3 bytes using FV2	Expected value is {FF FF FF}	
	Reset Terminal profile		
	4 - Envelope menu selection is sent to the UICC	4- Applet1 is triggered	
	Applet1 calls FV2.status() command	Current selected DF is ADF1	

ld	Description	API Expectation	APDU Expectation
	Read first 3 bytes using FV2	UICCException.NO_EF_SELECTE D.	
	Applet1 calls FV2.select(EFRFU1)	UICCException.FILE_NOT_FOUN D is thrown	
	5- Select the Applet by AID Invoke the method getTheAdminFileView() with AID = ADF1 with buffer[20] = {ADF1,} bOffset= 0 bLength= 16 the event:JCSystem.CLEAR_ON_DESELECT and stores the result in a class variable FV3	5- Applet1 is selected No Exception shall be thrown	
	Applet1 calls FV3.status() command Select DFTest using FV3	Current selected DF is ADF1	
	Select EFTARU using FV3 Read first 3 bytes using FV3	Expected value is {FF FF FF}	
	6- Select the Applet by AID	6- Applet1 is selected	
	Applet1 calls FV3.status() command	Current selected DF is ADF1	
	Read first 3 bytes using FV3	UICCException.NO_EF_SELECTE D.	
	Applet1 calls FV3.select(EFRFU1)	UICCException.FILE_NOT_FOUN D is thrown	
3	FileView context independency		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- Check that previous fileviews are different (FV1 != FV2 != FV3)		
	3- Select DFTest/EFLARU using FV1	3- No exception shall be thrown	
	4- Select DFTest/EFCARU using FV2	4- No exception shall be thrown	
	5- Select DFTest/EFCARU using FV3	5- An exception shall be thrown	
	6- Read record number 1 using FV1 (in absolute mode)	6- Expected value is "55 55 55"	
	7- Read record number 2 using FV2 (in absolute mode)	7- Expected value is "AA AA AA"	
4	ILLEGAL_TRANSIENT SystemException		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	<pre>2- Applet1 calls getTheAdminFileView() method with buffer[20] = {ADF1,} bOffset= 0 bLength= 16 with</pre>	2- SystemException. ILLEGAL_TRANSIENT is thrown	
	the event JCSystem.CLEAR_ON_DESELECT		

ld	Description	API Expectation	APDU Expectation
5	NO_TRANSIENT_SPACE SystemException		-
	with CLEAR_ON_RESET FileView object		
	1- Get the available transient memory	1- No Exception shall be thrown	
	space using method length =	1- No Exception shall be thrown	
	JCSystem.getAvailableMemory(MEMORY_TYP_TRA		
	NSIENT_RESET)		
	2- If length < 32767, (test case could be		
	performed)	2.1- No Exception shall be thrown	
	2.1- Fill the available transient memory space by creating array, using method		
	JCSystem.makeTransientByteArray(length,		
	JCSystem.CLEAR_ON_RESET)		
	2.2- Applet calls method	2.2- SystemException.	
	getTheAdminFileView() with buffer[20] =	NO_TRANSIENT_SPACE is	
	{ADF1,}	thrown	
	bOffset= 0 bLength= 16		
	with the event		
	JCSystem.CLEAR_ON_RESET		
6	NO_TRANSIENT_SPACE SystemException		
	with CLEAR_ON_DESELECT FileView object		
	1 - Select the Applet by AID	1- Applet1 is triggered	
	2- Get the available transient memory	2- No Exception shall be thrown	
	<pre>space using method length = JCSystem.getAvailableMemory(MEMORY TYPE TR</pre>	·	
	ANSIENT_DESELECT)		
	3- If length < 32767, (test case could be		
	performed) 3.1- Fill the available transient memory	3.1- No Exception shall be thrown	
	space by creating array, using method		
	JCSystem.makeTransientByteArray(length, JCSystem.CLEAR ON DESELECT)		
	}		
	<pre>3.2- Applet calls method getTheAdminFileView() with buffer[20] =</pre>	3.2- SystemException.	
	{ADF1,}	NO_TRANSIENT_SPACE is thrown	
	bOffset= 0		
	bLength= 16 with event:		
	JCSystem.CLEAR_ON_DESELECT		
	4- Reset		
7	ILLEGAL_VALUE SystemException		
	1- Invoke the method cotTholdminEilovicov/		
	<pre>1- Invoke the method getTheAdminFileView() with every event codes except: 0, 1, 2</pre>	1- System Exception II I EGAL VALLE	
		SystemException.ILLEGAL_VALU E is thrown	
8	NullPointerException		
	<pre>Invoke the method getTheAdminFileView() with buffer[20] = null</pre>		
	with buffer[20] = null bOffset= 0		
	bLength= 16		
	with event: 1 - JCSystem.CLEAR_ON_RESET	1- Shall be thrown	
	2 00 / D COM. CHARLON_NEDDI	java.lang.NullPointerException	

ld	Description	API Expectation	APDU Expectation
9	ArrayIndexOutOfBoundsException		
	1-Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	Invoke the method getTheAdminFileView() with buffer[20] = {ADF1,} bOffset= 5 bLength= 16 event =JCSystem. CLEAR_ON_RESET	Shall be thrown ArrayIndexOutOfBoundsException	
	<pre>Invoke the method getTheAdminFileView() with buffer[20] = {ADF1,} bOffset= -1 bLength= 16 event =JCSystem. CLEAR_ON_RESET</pre>	Shall be thrown ArrayIndexOutOfBoundsException	
10	SystemException.ILLEGAL_VALUE		
	1-Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	<pre>Invoke the method getTheAdminFileView() with buffer[20] = {ADF1,} b0ffset= 0 bLength= 4 event =JCSystem. CLEAR ON RESET</pre>	SystemException.ILLEGAL_VALU E shall be thrown	
	<pre>Invoke the method getTheAdminFileView() with buffer[20] = {ADF1,} bOffset= 0</pre>	SystemException.ILLEGAL_VALU E shall be thrown	
	bLength= 17 event =JCSystem. CLEAR_ON_RESET		

5.3.3 Class AdminException

5.3.3.1 Constructor

Test Area Reference: Api_4_Aex_Coor.

5.3.3.1.1 Conformance requirement

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

public AdminException(short reason)

5.3.3.1.1.1 Normal execution

• CRRN1: Constructs an AdminException with the specified reason.

5.3.3.1.1.2 Parameter errors

No requirements.

5.3.3.1.1.3 Context errors

No requirements.

5.3.3.1.2 Test area files

Test Source: Test_Api_4_Aex_Coor.java.

Test Applet: Api_4_Aex_Coor_1.java.

Cap File: Api_4_Aex_Coor.cap.

5.3.3.1.3 Test coverage

CRR number	Test case number
N1	1

5.3.3.1.4 Test procedure

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

5.3.3.2 Method throwlt

Test Area Reference: Api_4_Aex_Thit.

5.3.3.2.1 Conformance requirement

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

5.3.3.2.1.1 Normal execution

- CRRN1: Throws the JCRE instance of AdminException with the specified reason.
- CRRN2: Etends javacard.framework.CardRuntimeException.

5.3.3.2.1.2 Parameter errors

No requirements.

5.3.3.2.1.3 Context errors

No requirements.

5.3.3.2.2 Test area files

Test_Api_4_Aex_Thit.java.

Test Applet: Api_4_Aex_Thit_1.java.

Cap File: Api_4_Aex_Thit.cap.

5.3.3.2.3 Test coverage

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

5.3.3.2.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Throws the JCRE instance of AdminException with	Reason = 0	
	the specified reason		
2	Throws the JCRE instance of AdminException with	Reason = 1	
	the specified reason		
3	Throws the JCRE instance of AdminException with	Reason = 0xA55A	
	the specified reason		
4	AdminException extends	Reason = 0	
	javacard.framework.CardRuntimeException		
5		Reason = 1	
	javacard.framework.CardRuntimeException		
6		Reason = 0xA55A	
	javacard.framework.CardRuntimeException		

5.3.3.3 Reason Codes

Test Area Reference: Api_4_Aex_Cons.

5.3.3.3.1 Conformance Requirement:

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

5.3.3.3.1.1 Normal execution

- CRRN1: The Constants of the class AdminException shall all have the same name and value defined in the ETSI TS 102 241 [9].
- CRRN2: Constructs AdminException an Exception with the specified reason.

5.3.3.1.2 Parameter errors

No requirements.

5.3.3.1.3 Context errors

No requirements.

5.3.3.3.2 Test area files

None.

5.3.3.3 Test Coverage

CRR number	umber Test case number	
N1 & N2	The constants in Java are resolved at compilation time, therefore a runtime test is not	
	useful. No test of constants will be performed	

5.3.3.4 Test Procedure

None.

5.4 Package uicc.system

5.4.1 Class HandlerBuilder

5.4.1.1 Method buildTLVHandler(byte type, short capacity)

Test Area Reference: Api_3_Hdb_Bthdbs.

5.4.1.1.1 Conformance requirement

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

5.4.1.1.1 Normal execution

• CRRN1: Allocates a TLVHandler with an internal buffer of length capacity.

5.4.1.1.2 Parameter errors

- CRRP1: If the type parameter does not match with the predefined values, a javacard.framework.SystemException is thrown with ILLEGAL_VALUE reason code.
- CRRP2: If capacity is negative, a javacard.framework.SystemException is thrown with ILLEGAL_VALUE reason code.

5.4.1.1.3 Context errors

• CRRC1: If there are not enough resources in the card to allocate the handler, a javacard.framework.SystemException is thrown with NO_RESOURCE reason code.

5.4.1.1.2 Test area files

Test Source: Test_Api_3_Hdb_Bthdbs.java.

Test Applet: Api_3_Hdb_Bthdbs_1.java.

Cap File: Api_3_hdb_bthdbs.cap.

5.4.1.1.3 Test coverage

CRR number	Test case number
N1	1, 2
P1	4, 5
P2	3
C1	Not testable

5.4.1.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call buildTLVHandler() method with		
	EDIT_HANDLER type		
		No exception shall be thrown	
	Type = EDIT_HANDLER	·	
	Capacity = (short)10		
	Check the created object is not null		
2	Call buildTLVHandler() method with		
	BER_EDIT_HANDLER type		
	Troo DED EDIT HANDI ED	No exception shall be thrown	
	Type = BER_EDIT_HANDLER Capacity = (short)10		
	Check the created object is not null		
3	Negative capacity		
	inogum o cupucity	A	
	Type = EDIT_HANDLER	javacard.framework.SystemE	
	Capacity = (short)-10	xception is thrown with	
		ILLEGAL VALUE reason	
		code	
4	Type does not match with predefined	javacard.framework.SystemE	
	values	xception shall be thrown with	
		ILLEGAL VALUE reason	
	Type = (byte)3	code.	
	Capacity = (short)10		
5	Type does not match with predefined	javacard.framework.SystemE	
	values	xception shall be thrown with	
		ILLEGAL_VALUE reason	
	Type = (byte)0	code.	
1	Capacity = (short)10		

5.4.1.2 Method buildTLVHandler(byte type, short capacity, byte[] buffer , short offset, short length)

Test Area Reference: Api_3_Hdb_Bthdbs_Bss.

5.4.1.2.1 Conformance requirement

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

5.4.1.2.1.1 Normal execution

- CRRN1: Allocates a TLVHandler with an internal buffer of length capacity.
- CRRN2: Copies the buffer content to an internal buffer of the TLVHandler starting at bOffset.
- CRRN3: The internal buffer shall be at least bLength long.

5.4.1.2.1.2 Parameter errors

- CRRP1: If the type does not match with the predefined values, a javacard.framework.SystemException is thrown with ILLEGAL_VALUE reason code.
- CRRP2: If buffer is null, a java.lang.NullPointerException is thrown.

- CRRP3: If bOffset would cause access outside array bounds, an java.lang.ArrayIndexOutOfBoundsException is thrown.
- CRRP4: if bLength is negative, a java.lang.ArrayIndexOutOfBoundsException is thrown.
- CRRP5: If capacity is negative, a javacard.framework.SystemException is thrown with ILLEGAL_VALUE reason code.
- CRRP6: If bOffset+bLength is greater than the length of the buffer, a java.lang.ArrayIndexOutOfBoundsException is thrown.

5.4.1.2.1.3 Context errors

• CRRC1: If there are not enough resources in the card to allocate the handler, a javacard.framework.SystemException is thrown with NO_RESOURCE reason code.

5.4.1.2.2 Test area files

Test Source: Test_Api_3_Hdb_Bthdbs_Bss.java.

Test Applet: Api_3_Hdb_Bthdbs_Bss_1.java.

Cap File: Api_3_hdb_bthdbs_bss.cap.

5.4.1.2.3 Test coverage

CRR number	Test case number	
N1	1, 2	
N2	6	
N3	1, 2, 6	
P1	4, 5	
P2	7	
P3	8, 9	
P4	10	
P5	3	
P6	11	
C1	Not testable	

5.4.1.2.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call buildTLVHandler() method with EDIT_HANDLER type		
	<pre>Type = EDIT_HANDLER Capacity = (short)10 Buffer[10] Offset = (short)0 Length = (short)0</pre>	No exception shall be thrown	
	Check the created object is not null		
2	Call buildTLVHandler() method with BER_EDIT_HANDLER type Type = BER_EDIT_HANDLER Capacity = (short)10 Buffer[10] Offset = (short)0 Length = (short)0 Check the created object is not null	No exception shall be thrown	
3	Negative capacity Type = EDIT_HANDLER Capacity = (short)-10 Buffer[10] Offset = (short)0 Length = (short)5	A javacard.framework.SystemE xception is thrown with ILLEGAL_VALUE reason code	

ld	Description	API Expectation	APDU Expectation
4	Type does not match with predefined		,
	values		
		A	
	Type = (byte)0	javacard.framework.SystemE	
	<pre>Capacity = (short)10 Buffer[10]</pre>	xception shall be thrown with	
	Offset = (short)0	ILLEGAL_VALUE reason	
	Length = (short)5	code	
5	Type does not match with predefined		
	values		
	m (1 +) 2	Α	
	Type = (byte)3 Capacity = (short)10	javacard.framework.SystemE	
	Buffer[10]	xception shall be thrown with	
	Offset = (short)0	ILLEGAL_VALUE reason	
	Length = (short)5	code	
6	Internal Buffer starts at bOffset		
	Type = EDIT HANDLER		
	Capacity = (short)10	No expension shall be the	
	Buffer[10]	No exception shall be thrown	
	Offset = (short)4		
	Length = (short)5		
	Check the internal buffer of the TLVHandler starts with bOffset data.		
7	Buffer is null		
'			
	Type = EDIT_HANDLER	A	
	Capacity = (short)10	java.lang.NullPointerExceptio	
	<pre>Buffer[] = null Offset = (short)0</pre>	n shall be thrown.	
	Length = (short)5		
8	bOffset > Buffer Length		
	_		
	Type = EDIT_HANDLER	A	
	<pre>Capacity = (short)10 Buffer[10]</pre>	java.lang.ArrayIndexOutOfBo	
	Offset = (short)11	undsException shall be	
	Length = (short)0	thrown	
9	bOffset < 0		
	The second secon		
	Type = EDIT_HANDLER Capacity: (short)10	A	
	Buffer[10]	java.lang.ArrayIndexOutOfBo	
	Offset = (short)-1	undsException shall be thrown	
40	Length = (short)0	unown	
10	bLength < 0		
	Type = EDIT HANDLER		
	Capacity = (short)10	java.lang.ArrayIndexOutOfBo	
	Buffer[10]	undsException shall be	
	Offset = (short) 0	thrown	
11	Length = (short) -1 bOffset+bLength > buffer length		
' '	Solisettbeelight > bullet lelight		
	Type = EDIT_HANDLER	A	
	Capacity = (short)10	java.lang.ArrayIndexOutOfBo	
	Buffer[10] Offset = (short)7	undsException shall be	
	Length = (short) 8	thrown	
	12012011 - (011010)0	1	

5.4.2 Interface UICCPlatform

5.4.2.1 Method getTheVolatileByteArray

Test Area Reference: Api_3_Upf_Gvba.

5.4.2.1.1 Conformance requirement

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

public static byte[] getTheVolatileByteArray()

5.4.2.1.1.1 Normal execution

• CRRN1: Returns the instance of the volatile byte array designated by the JCRE as global array. The byte array length shall be at least equal to 256 bytes.

5.4.2.1.1.2 Parameter errors

No requirement.

5.4.2.1.1.3 Context errors

- CRRC1: If the method is invoked from a context which is not the currently selected applet or the currently triggered applet i.e. the context of the applet that treats the current APDU or the context of the applet that has been triggered by the current APDU, a java.lang.SecurityException is thrown.
- CRRC2: A reference to this byte array cannot be stored in class variables or instance variables or array components.

5.4.2.1.2 Test area files

Test Source: Test_Api_3_Upf_Gvba.java.

Test Applet: Api_3_Upf_Gvba_1.java.

Api_ShareableInterface.java.

Api_GetShareableClientApplet.java.

Cap File: Api_3_upf_gvba.cap.

Api_3_upf_gvba2.cap.

5.4.2.1.3 Test coverage

CRR number	Test case number	
N1	1	
C1	2	
C2	3, 4, 5	

5.4.2.1.4 Test procedure

ld	Description	API Expectation	APDU Expectation
1	Call getTheVolatileByteArray() method and store it in a local variable		
	1- Trigger the applet and check the returned byte array length is at least equal to 256 bytes.	1- No exception shall be thrown.	
	2- Select the applet and check the returned byte array length is at least equal to 256 bytes.	2- No exception shall be thrown.	
2	Method invoked from a different context		
	By the way of the Shareable Interface, call the getTheVolatileByteArray() method through another applet.	A java.lang.SecurityException shall be thrown.	
3	Store the instance in a class variable	A java.lang.SecurityException shall be thrown.	
4	Store the instance in an instance variable	A java.lang.SecurityException shall be thrown.	
5	Store the instance in an array component	A java.lang.SecurityException shall be thrown.	

5.5 CAT Runtime Environment

5.5.1 Minimum Handler Availability

This test area tests the rules that define the minimum requirements for the availability of the system handlers.

5.5.1.1 ProactiveHandler

Test Area Reference: Cre_Mha_Pahd.

5.5.1.1.1 Conformance requirement

5.5.1.1.1.1 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_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_BY_NAA

EVENT_PROFILE_DOWNLOAD

EVENT_EVENT_DOWNLOAD_DATA_AVAILABLE

EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS

EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHANGE

EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CHANGED

EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION

EVENT_PROACTIVE_HANDLER_AVAILABLE

EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_CHANGE

EVENT_EVENT_BROWSING_STATUS

EVENT_EXTERNAL_FILE_UPDATE

- CRRN2: A ProactiveHandler is considered available when no HANDLER_NOT_AVAILABLE ToolkitException is thrown when the corresponding getTheHandler() method is called or a method of the handler is called.
- CRRN3: When available the *ProactiveHandler* shall remain available until the termination of the *processToolkit()* method.
- CRRN4: If a proactive command is pending the *ProactiveHandler* may not be available.

5.5.1.1.1.2 Parameter errors

No requirements.

5.5.1.1.3 Context errors

• CRRC1: The ProactiveHandler 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_FIRST_COMMAND_AFTER_ATR

EVENT_APPLICATION_DESELECT

- CRRC2: The ProactiveHandler shall not be available if the Terminal Profile command has not yet been processed by the CAT Runtime Environment
- CRRC3: The ProactiveHandler shall not be available if the *getTheHandler()* method is not called, directly or indirectly, from the applet's *processToolkit()* method.

5.5.1.1.2 Test area files

Test Source: Test_Cre_Mha_Pahd.java.

Test Applet: Cre_Mha_Pahd_1.java.

Cre_Mha_Pahd_2.java.

Cre_Mha_Pahd_3.java.

Cap File: Cre_Mha_Pahd.cap.

5.5.1.1.3 Test coverage

CRR Number	Test Case Number
CRRN1	2 to 23, 45, 46
CRRN2	1 to 22,45,46
CRRN3	2 to 22, 45, 46
CRRN4	Not testable
CRRC1	1, 24
CRRC2	25 to 44 or also tested in TestCases 25 to 44 in Cre_Mha_Prhd
CRRC3	47

5.5.1.1.4 Test procedure

ld	Description	API /Framework Expectation	APDU Expectation
1	Applets registration to all events and Proactive		
	Handler availability with EVENT_FIRST_COMMAND_AFTER_ATR		
	EVENT_TIKST_COMMAND_ALTER_ATK		
	Applet1 is registered to all events		
	defined in TS 102 241 [9] except to EVENT PROACTIVE HANDLER AVAILABLE.		
	Using the methods initMenuEntry() for		
	EVENT_MENU_SELECTION, requestPollInterval() for		
	EVENT_STATUS_COMMAND, allocateTimer() for		
	EVENT_TIMER_EXPIRATION,		
	allocateServiceIdentifier() for EVENT EVENT DOWNLOAD LOCAL CONNECTION and		
	setEventList() for the rest of the events.		
	Applet1 is registered on EVENT_EXTERNAL_FILE_UPDATE on update of		
	${\sf EF}_{\sf TARU}$ of the UICC file system		
	Applet2 is registered to all events		
	defined in TS 102 241 [9], except to		
	EVENT_PROACTIVE_HANDLER_AVAILABLE and EVENT CALL CONTROL BY NAA.		
	Using the methods initMenuEntry() for		
	<pre>EVENT_MENU_SELECTION, requestPollInterval() for</pre>		
	EVENT_STATUS_COMMAND, allocateTimer() for		
	<pre>EVENT_TIMER_EXPIRATION and setEventList() for the rest of the events.</pre>		
	Applet2 is registered on		
	EVENT_EXTERNAL_FILE_UPDATE on update of		
	EF _{TARU} of the UICC file system		
	The priority of Applet1 is higher than		
	priority of Applet2	1- Applet1 is triggered by	
	1- Select MF	EVENT_FIRST_COMMAND_AFTE	
		R_ATR	
	2 Applet 1 met a the Decembine Hendley	2- A ToolkitException	
	2- Applet1 gets the Proactive Handler. Applet1 is deregistered from	HANDLER_NOT_AVAILABLE is	
	EVENT_FIRST_COMMAND_AFTER_ATR.	thrown.	
		Applet1 finalizes	
		Applet mail200	
		Applet2 is triggered by	
		EVENT_FIRST_COMMAND_AFTE R ATR	
	3- Applet2 gets the Proactive Handler	IX_ATK	
	Applet2 is deregistered to	3- A ToolkitException	
	EVENT_FIRST_COMMAND_AFTER_ATR.	HANDLER_NOT_AVAILABLE is	
		thrown. Applet2 finalizes	
2	Proactive Handler availability with	r.pp.o.z manzos	
	EVENT_PROFILE_DOWNLOAD		
	1- Terminal Profile command is sent to the	1- Applet1 is triagered by	
	UICC without the facility of SET UP EVENT LIST, POLL INTERVAL, SET UP IDLE MODE TEXT	EVENT_PROFILE_DOWNLOAD	
	and SET UP MENU.		
	2- Applet1 gets the Proactive Handler		
	Applet1 is deregistered to	2- No exception is thrown	
	EVENT_PROFILE_DOWNLOAD	Applet1 finalizes.	
		Applet2 is triggered by	
	3- Applet2 gets the Proactive Handler	EVENT_PROFILE_DOWNLOAD	
	Applet2 is deregistered to	0 No	
	EVENT_PROFILE_DOWNLOAD	3- No exception is thrown Applet2 finalizes	
L		Applete IIIIalizes	

ld	Description	API /Framework Expectation	APDU Expectation
3	Proactive Handler availability with EVENT_MENU_SELECTION_HELP_REQUEST		
	Perform UICC initialization with all the facilities supported, without facility SET_UP_EVENT_LIST		
		1- Applet1 is triggered	
	1- Envelope menu selection with help request is sent to the UICC	2- No exception is thrown	
	2- Applet1 gets the Proactive Handler	Applet1 finalizes	
4	Proactive Handler availability with EVENT_MENU_SELECTION		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
		Applet1 finalizes	
5	Proactive Handler availability with EVENT_TIMER_EXPIRATION		
	1- Timer Id =1 Envelope Timer Expiration is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
		Applet1 finalizes	
6	Proactive Handler availability with EVENT_CALL_CONTROL_BY_NAA		
	1- Envelope call control by NAA is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
		Applet1 finalizes	
7	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_MT_CALL		
	1- Envelope event download mt call is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
	3- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
	- ippreez gees the froaterve nameter	3-No exception is thrown	
		Applet2 finalizes	

ld	Description	API /Framework Expectation	APDU Expectation
8	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED	_	·
	1- Envelope event download call connected is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	3- Applet2 gets the Proactive Handler	3- No exception is thrown	
		Applet2 finalizes	
9	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_DISCONN ECTED		
	1- Envelope event download call disconnected is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
	3- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
	5 Apprecia gees one frometive numeror	3- No exception is thrown	
		Applet2 finalizes	
10	Applets triggering with EVENT_EVENT_DOWNLOAD_LOCATION_STA TUS		
	1- Envelope event download location status is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
	3- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- No exception is thrown	
		Applet2 finalizes	
11	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_USER_ACTIVITY		
	1- Envelope event download user activity is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
	3- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- No exception is thrown	
		Applet2 finalizes	

ld	Description	API /Framework Expectation	APDU Expectation
12	Proactive Handler availability with	Press	P • • • • • • • • • • • • • • • • • • •
	EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_ AVAILABLE		
	AVAILABLE		
	1- Envelope event download idle screen available is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
	3- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- No exception is thrown	
		Applet2 finalizes	
13	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CARD_READERSTATUS		
	1- Envelope event download card reader status is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	3- Applet2 gets the Proactive Handler	3- No exception is thrown	
		Applet2 finalizes	
14	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_LANGUAGE_SE LECTION		
	1- Envelope event download language selection is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	3- Applet2 gets the Proactive Handler	3- No exception is thrown	
		Applet2 finalizes	
15	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_BROWSER_TER MINATION		
	1- Envelope event download browser termination is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	3- Applet2 gets the Proactive Handler	3- No exception is thrown	
		Applet2 finalizes	

ld	Description	API /Framework Expectation	APDU Expectation
16	Proactive Handler availability with		-
	EVENT_STATUS_COMMAND	1 Applet1 is trices and	
	1- Status command is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
	2- Appreci gets the Proactive Handrer	Analata Gastina	
		Applet1 finalizes Applet2 is triggered	
	2 Auglista with the Proportion World on		
	3- Applet2 gets the Proactive Handler	3- No exception is thrown	
		Applet2 finalizes	
17	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_DATA_AVAILAB LE		
	1- Applet1 builds a proactive command OPEN CHANNEL proactiveHandler.send() method is called.		1- OPEN CHANNEL proactive Command is fetched
	2- An Envelope Event Download Data Available is sent to the UICC, with channelId=01.	2- Applet1 is triggered	TERMINAL RESPONSE is issued with Channel Id = 01
	3- Applet1 gets the Proactive Handler	3- No exception is thrown Applet1 finalizes	
18	Proactive Handler availability with		
	EVENT_EVENT_DOWNLOAD_CHANNEL_STAT US		
	1- An Envelope Event Download Channel Status is sent to the UICC, with ChannelId=01	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown Applet1 finalizes	
19	Proactive Handler availability with UNRECOGNIZED_ENVELOPE		
	1- An unrecognized Envelope (BER TLV Tag unrecognized) is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
	3-Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- No exception is thrown	
		Applet2 finalizes	
20	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_ACCESS_TECHN OLOGY_CHANGE		
	1- An envelope event download access technology change is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
	3-Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- No exception is thrown	
		Applet2 finalizes	

ld	Description	API /Framework Expectation	APDU Expectation
21	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_DISPLAY_PARA METERS_CHANGED		
	1- An envelope event download display parameter changed is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
		3- Applet1 sends a DECLARE SERVICE (add) proactive command with its service identifier	3- DECLARE SERVICE (add) proactive command is fetched
		Applet1 finalizes Applet2 is triggered	Successful TERMINAL RESPONSE is issued
	4-Applet2 gets the Proactive Handler	4- No exception is thrown	
00	Describes Handles and Jak Witnessith	Applet2 finalizes	
22	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_LOCAL_CONNE CTION		
	1- An envelope event download local connection is sent to the UICC, with the allocated service identifier	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
		Applet1 finalizes	
23	Proactive Handler availability with EVENT_PROACTIVE_HANDLER_AVAILABLE		
	1- Envelope event download call connected is sent to the UICC	1- Applet1 is triggered and registers to EVENT_PROACTIVE_HANDLER_ AVAILABLE	
		Applet1 finalizes Applet2 is triggered, registers to EVENT_PROACTIVE_HANDLER_ AVAILABLE and sends a Display Test proactive command	
	2-The display Text proactive command is fetch and the terminal response is sent	2- Applet1 is triggered by EVENT_PROACTIVE_HANDLER_AVAILABLE	
	3-Applet1 gets the Proactive Handler	3- No exception is thrown	
	4-Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered by EVENT_PROACTIVE_HANDLER_ AVAILABLE	
		4- No exception is thrown	
		Applet2 finalizes	

ld	Description	API /Framework Expectation	APDU Expectation
24	Proactive Handler availability with	·	·
	EVENT_APPLICATION_DESELECT		
	1- Select for activation ADF1		
	2- Select for termination ADF1	2- Applet1 is triggered	
	3- Applet1 gets the Proactive Handler Applet1 deregisters to EVENT_APPLICATION_DESELECT.	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet1 finalizes Applet2 is triggered	
	4-Applet2 gets the Proactive Handler Applet2 deregisters to EVENT_APPLICATION_DESELECT	4- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	
25	The ProactiveHandler is not available before the Terminal Profile with EVENT_MENU SELECTION_HELP_REQUEST		
	1- Reset the card without sending the Terminal Profile		
	2- Envelope menu selection with help request is sent to the UICC	2- Applet1 is triggered	
	3- Applet1 gets the Proactive Handler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes	
26	The ProactiveHandler is not available before the Terminal Profile with EVENT_MENU SELECTION		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes	
27	The ProactiveHandler is not available before the Terminal Profile with EVENT_TIMER_EXPIRATION		
	1- Timer Id =1 Envelope Timer Expiration is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes	

ld	Description	API /Framework Expectation	APDU Expectation
28	The ProactiveHandler is not available before the Terminal Profile with EVENT_CALL_CONTROL_BY_NAA		
	1- Envelope call control by NAA is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet1 finalizes	
29	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_MT_CALL		
	1- Envelope event download mt call is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	3- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	
30	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED		
	1- Envelope event download call connected is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	3- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	

ld	Description	API /Framework Expectation	APDU Expectation
31	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_CALL_DISCONN ECTED		
	1- Envelope event download call disconnected is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	3- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	
32	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_LOCATION_STA TUS		
	1- Envelope event download location status is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes Applet2 is triggered	
	3- Applet2 gets the Proactive Handler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	
33	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_USER_ACTIVITY		
	1- Envelope event download user activity is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	3- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	

ld	Description	API /Framework Expectation	APDU Expectation
34	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_ AVAILABLE		
	1- Envelope event download idle screen available is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes Applet2 is triggered	
	3- Applet2 gets the Proactive Handler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	
35	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_CARD_READERSTATUS		
	1- Envelope event download card reader status is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	3- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	
36	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_LANGUAGE_SE LECTION		
	1- Envelope event download language selection is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes Applet2 is triggered	
	3- Applet2 gets the Proactive Handler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	

ld	Description	API /Framework Expectation	APDU Expectation
37	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_BROWSER_TER MINATION		
	1- Envelope event download browser termination is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes Applet2 is triggered	
	3- Applet2 gets the Proactive Handler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	
38	The ProactiveHandler is not available before the Terminal Profile with EVENT_STATUS_COMMAND		
	1- Status command is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	3- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	
39	The ProactiveHandler is not available before the Terminal Profile with UNRECOGNIZED_ENVELOPE		
	1- An unrecognized Envelope (BER TLV Tag unrecognized) is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	3-Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	

ld	Description	API /Framework Expectation	APDU Expectation
40	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_ACCESS_TECHN OLOGY_CHANGE		
	1- An envelope event download access technology change is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes Applet2 is triggered	
	3-Applet2 gets the Proactive Handler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	
41	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_DISPLAY_PARA METERS_CHANGED		
	1- An envelope event download display parameter changed is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 registers to EVENT_PROACTIVE_HANDLER_ AVAILABLE then finalizes	
	3-Applet2 gets the Proactive Handler	Applet2 is triggered	
		3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 registers to EVENT_PROACTIVE_HANDLER_ AVAILABLE then finalizes	
42	The ProactiveHandler is not available before the Terminal Profile with EVENT_PROACTIVE_HANDLER_AVAILABLE		
		Applet1 and Applet2 are not triggered by EVENT_PROACTIVE_HANDLER_AVAILABLE	

ld	Description	API /Framework Expectation	APDU Expectation
43	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_NETWORK_SE ARCH_MODE_CHANGE		
	1- Envelope event download network search mode change is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 deregisters from EVENT_PROACTIVE_HANDLER_AVAILABLE	
		Applet1 finalizes	
		Applet2 is triggered	
	3- Applet2 gets the Proactive Handler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet2 deregisters from EVENT_PROACTIVE_HANDLER_ AVAILABLE	
		Applet2 finalizes	
44	The ProactiveHandler is not available before the Terminal Profile with		
	EVENT_EVENT_DOWNLOAD_BROWSING STATUS		
	1- Envelope event download browsing status is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	3- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	

ld	Description	API /Framework Expectation	APDU Expectation
45	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_NETWORK_SE ARCH_MODE_CHANGE		
	0- Reset card and sendTerminal Profile without facility SETUP_EVENT_LIST		
	1- Envelope event download network search mode change is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	3- Applet2 gets the Proactive Handler	3- No exception is thrown	
		Applet2 finalizes	
46	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_BROWSING STATUS		
	1- Envelope event download browsing status is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
	3- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- No exception is thrown	
		Applet2 finalizes	
47	The ProactiveHandler is not available outside the processToolkit() method		
	1- Install Applet3. In its install method, Applet3 gets the ProactiveHandler in a Try/Catch session	1- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	2- Select Applet3	2- Applet3 is triggered by its process() method	
	3- Applet3 gets the ProactiveHandler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	

5.5.1.2 ProactiveResponseHandler

Test Area Reference: Cre_Mha_Prhd.

5.5.1.2.1 Conformance requirement

5.5.1.2.1.1 Normal execution

• CRRN1: The ProactiveResponseHandler is available as soon as the ProactiveHandler is available and remains available untill the termination of the processToolkit method for the following events:

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_BY_NAA

EVENT_PROFILE_DOWNLOAD

EVENT_EVENT_DOWNLOAD_DATA_AVAILABLE

EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS

EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHANGE

EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CHANGED

EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION

EVENT PROACTIVE HANDLER AVAILABLE

EVENT EVENT DOWNLOAD NETWORK SEARCH MODE CHANGE

EVENT_EVENT_BROWSING_STATUS

EVENT_EXTERNAL_FILE_UPDATE

CRRN2: A ProactiveResponseHandler is considered available when no HANDLER_NOT_AVAILABLE
ToolkitException is thrown when the corresponding getTheHandler() method is called or a method of the
handler is called.

5.5.1.2.1.2 Parameter errors

No requirements.

5.5.1.2.1.3 Context errors

CRRC1: The ProactiveResponseHandler 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_FIRST_COMMAND_AFTER_ATR

EVENT_APPLICATION_DESELECT

- CRRC2: The ProactiveResponseHandler shall not be available if the ProactiveHandler is not available.
- CRRC3: The ProactiveResponseHandler shall not be available if the getTheHandler() method is not called, directly or indirectly, from the applet's processToolkit() method.

5.5.1.2.2 Test area files

Test Source: Test_Cre_Mha_Prhd.java.

Test Applet: Cre_Mha_Prhd_1.java.

 $Cre_Mha_Prhd_2.java.$

Cre_Mha_Prhd_3.java.

Cap File: Cre_Mha_Prhd.cap.

5.5.1.2.3 Test coverage

CRR Number	Test Case Number
CRRN1	2 to 23, 45, 46
CRRN2	1 to 22,45,46
CRRC1	1, 24
CRRC2	25 to 44
CRRC3	47

5.5.1.2.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applets registration to all events and Proactive		
	Handler availability with		
	EVENT_FIRST_COMMAND_AFTER_ATR		
	Applet1 is registered to all events		
	Applet1 is registered to all events defined in TS 102 241 [9] except to		
	EVENT PROACTIVE HANDLER AVAILABLE.		
	Using the methods initMenuEntry() for		
	EVENT MENU SELECTION,		
	requestPollInterval() for		
	EVENT STATUS COMMAND, allocateTimer() for		
	EVENT TIMER EXPIRATION,		
	allocateServiceIdentifier() for		
	EVENT EVENT DOWNLOAD LOCAL CONNECTION and		
	setEventList() for the rest of the events.		
	Applet1 is registered on		
	EVENT EXTERNAL FILE UPDATE on update of		
	EFTARU of the UICC file system		
	Applet2 is registered to all events		
	defined in TS 102 241 [9], except to		
	EVENT PROACTIVE HANDLER AVAILABLE and		
	EVENT CALL CONTROL BY NAA.		
	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 on		
	EVENT_EXTERNAL_FILE_UPDATE on update of		
	EFTARU of the UICC file system		
	The priority of Applet1 is higher than		
	priority of Applet2		
	1- Select MF	1- Applet1 is triggered by	
		EVENT_FIRST_COMMAND_AFTE	
		R_ATR	
		N_/ N N N N N N N N N N	
	0 7 7 14 1 17 7 17 7	2- A ToolkitException	
	2- Applet1 gets the Proactive Handler.	•	
		HANDLER_NOT_AVAILABLE is	
		thrown.	
	3- Applet2 gets the Proactive Response	0.4.7.11.15	
	Handler	3- A ToolkitException	
		HANDLER_NOT_AVAILABLE is	

ld	Description	API/CAT RE Expectation	APDU Expectation
	Applet1 is deregistered from	thrown	
	EVENT_FIRST_COMMAND_AFTER_ATR.	Applet1 finalizes	
		Applet2 is triggered by EVENT_FIRST_COMMAND_AFTE R_ATR	
	4- Applet2 get the Proactive Handler 5- Applet2 gets the Proactive Response Handler Applet2 is deregistered to EVENT_FIRST_COMMAND_AFTER_ATR.	4- A ToolkitException HANDLER_NOT_AVAILABLE is thrown. 5- A ToolkitException HANDLER_NOT_AVAILABLE is thrown. Applet2 finalizes	
2	Proactive Handler availability with EVENT_PROFILE_DOWNLOAD		
	1- Terminal Profile command is sent to the UICC without the facility of SET UP EVENT LIST, POLL INTERVAL, SET UP IDLE MODE TEXT and SET UP MENU.	1- Applet1 is triggered by EVENT_PROFILE_DOWNLOAD	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler Applet1 is deregistered to	2- No exception is thrown 3- No exception is thrown Applet1 finalizes.	
	EVENT_PROFILE_DOWNLOAD	Applet2 is triggered by EVENT_PROFILE_DOWNLOAD	
	4- Applet2 gets the Proactive Handler 5-Applet2 gets the Proactive Respones Handler	4- No exception is thrown 5- No exception is thrown	
	Applet2 is deregistered to EVENT_PROFILE_DOWNLOAD	Applet2 finalizes	
3	Proactive Handler availability with EVENT_MENU_SELECTION_HELP_REQUEST		
	Perform UICC initialization with all the facilities supported, without facility SET_UP_EVENT_LIST		
	1- Envelope menu selection with help request is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- No exception is thrown 3- No exception is thrown	
		Applet1 finalizes	
4	Proactive Handler availability with EVENT_MENU_SELECTION	4. Appletd in trian	
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered2- No exception is thrown	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	3- No exception is thrown Applet1 finalizes	

Proactive Handler availability with EVENT_EVENT_CALL_CONTROL_BY_NAA	ld	Description	API/CAT RE Expectation	APDU Expectation
1- Timer Id =1 Envelope Timer Expiration is sent to the UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 6 Proactive Handler availability with EVENT_CALL_CONTROL_BY_NAA 1- Envelope call control by NAA is sent to the UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 7 Proactive Handler availability with EVENT_EVENT_DOWNLOAD_MT_CALL 1- Envelope event download mt call is sent to the UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 4- Applet2 gets the Proactive Response Handler 8 Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED 1- Envelope event download call connected 1- Applet1 is triggered 2- No exception is thrown 3- No exception is	5	Proactive Handler availability with		
1- Timer Id =1 Envelope Timer Expiration is sent to the UICC		EVENT_TIMER_EXPIRATION	1- Applet1 is triggered	
UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 6			, rippiett is triggered	
2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 6		l = =	2. No exception is thrown	
Applet1 gets the Proactive Response Handler Proactive Handler availability with EVENT_CALL_CONTROL_BY_NAA 1- Envelope call control by NAA is sent to the UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler Proactive Handler availability with EVENT_EVENT_DOWNLOAD_MT_CALL 1- Envelope event download mt call is sent to the UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 2- No exception is thrown Applet1 is triggered 1- Applet1 is triggered 2- No exception is thrown 3- No exception is thrown Applet1 finalizes Applet2 gets the Proactive Response Handler 4- Applet2 gets the Proactive Response Handler 5- Applet2 gets the Proactive Response Handler 5- Applet2 gets the Proactive Response Handler 5- Applet2 gets the Proactive Response Handler 4- No exception is thrown Applet2 finalizes 8 Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED 1- Envelope event download call connected 1- Applet1 is triggered		2- Applet1 gets the Proactive Handler		
6 Proactive Handler availability with EVENT_CALL_CONTROL_BY_NAA 1- Envelope call control by NAA is sent to the UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 7 Proactive Handler availability with EVENT_EVENT_DOWNLOAD_MT_CALL 1- Envelope event download mt call is sent to the UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 3- Applet1 gets the Proactive Response Handler 4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler 8 Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED 1- Envelope event download call connected 1- Applet1 is triggered 4- Applet2 finalizes 4-No exception is thrown 5-No exception is thrown 6-No ex		3- Applet1 gets the Proactive Response	Applet1 finalizes	
The second control by NAA is sent to the UICC		Handler		
1- Envelope call control by NAA is sent to the UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 7	6			
1- Envelope call control by NAA is sent to the UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 7		EVENT_CALL_CONTROL_BY_NAA	1- Applet1 is triggered	
2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 7			T- Applet 13 triggered	
3- Applet1 gets the Proactive Response Handler 7		the UICC	O No superficients of the same	
Handler Applet1 finalizes 7				
7 Proactive Handler availability with EVENT_EVENT_DOWNLOAD_MT_CALL 1- Envelope event download mt call is sent to the UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler 4- Applet2 gets the Proactive Response Handler 5- Applet2 gets the Proactive Response Handler 4-No exception is thrown 5-No exception is thrown 5-No exception is thrown 4-No exception is thrown 5-No exception is thrown 5-No exception is thrown 4-Polet2 finalizes 8 Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED 1- Envelope event download call connected 1- Applet1 is triggered			·	
EVENT_EVENT_DOWNLOAD_MT_CALL 1- Envelope event download mt call is sent to the UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler 4- No exception is thrown 4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler 4-No exception is thrown 5-No exception is thrown 5-No exception is thrown 4-No exception is thrown 5-No exception is thrown 4-No exception is thrown 5-No exception is thrown 5-No exception is thrown 1- Applet2 finalizes			Applet1 finalizes	
1- Envelope event download mt call is sent to the UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 3- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler 4-No exception is thrown 5-No exception is thrown 5-No exception is thrown 4-No exception is thrown 5-No exception is thrown 5-No exception is thrown 1- Applet2 finalizes	7			
to the UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler 2- No exception is thrown 3- No exception is thrown Applet1 finalizes Applet2 is triggered 4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler 4-No exception is thrown 5-No exception is thrown 5-No exception is thrown 5-No exception is thrown 5-No exception is thrown 1- Event Handler Applet2 finalizes 1- Applet1 is triggered		EVENT_EVENT_DOWNLOAD_MT_CALL		
3- Applet1 gets the Proactive Response Handler 2- No exception is thrown 3- No exception is thrown Applet1 finalizes Applet2 is triggered 4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler 4-No exception is thrown 5-No exception is thrown 1- Event Proactive Handler 5- Applet2 finalizes 8 Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED 1- Envelope event download call connected 1- Applet1 is triggered			1- Applet1 is triggered	
Handler 3- No exception is thrown Applet1 finalizes Applet2 is triggered 4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler 4-No exception is thrown 5-No exception is thrown 5-No exception is thrown 4-No exception is thrown 5-No exception is thrown 6-No exception is thrown			2. No execution is thrown	
Applet2 is triggered 4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler 4-No exception is thrown 5-No exception is thrown Applet2 finalizes 8 Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED 1- Envelope event download call connected 1- Applet1 is triggered				
Applet2 is triggered 4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler 4-No exception is thrown 5-No exception is thrown Applet2 finalizes 8 Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED 1- Envelope event download call connected 1- Applet1 is triggered			Applet4 finalizes	
4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler 4-No exception is thrown 5-No exception is thrown Applet2 finalizes 8 Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED 1- Envelope event download call connected 1- Applet1 is triggered				
5- Applet2 gets the Proactive Response Handler 5-No exception is thrown Applet2 finalizes 8 Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED 1- Envelope event download call connected 1- Applet1 is triggered		4- Applet2 gets the Proactive Handler		
Applet2 finalizes 8		5- Applet2 gets the Proactive Response		
8 Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED 1- Envelope event download call connected 1- Applet1 is triggered		Handler		
EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED 1- Envelope event download call connected 1- Applet1 is triggered	0	Proactive Handler availability with	Applet2 finalizes	
- I Applet is tiggered	0	EVENT_EVENT_DOWNLOAD_CALL_CONNECT		
is sent to the old		I =	1- Applet1 is triggered	
		The period of the proc		
2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response 2- No exception is thrown			2- No exception is thrown	
Handler 3- No exception is thrown				
Applet1 finalizes			Applet1 finalizes	
Applet2 is triggered				
4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response 4- No exception is thrown			4- No exception is thrown	
5- Applet2 gets the Proactive Response Handler 5. No exception is thrown		l == = =		
Applet2 finalizes			Appletz Illializes	

ld	Description	API/CAT RE Expectation	APDU Expectation
9	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CALL_DISCONNE CTED		
	1- Envelope event download call disconnected is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- No exception is thrown 3- No exception is thrown Applet1 finalizes	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler	Applet2 is triggered 4- No exception is thrown 5- No exception is thrown Applet2 finalizes	
10	Applets triggering with EVENT_EVENT_DOWNLOAD_LOCATION_STAT US		
	1- Envelope event download location status is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- No exception is thrown 3- No exception is thrown	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler	Applet1 finalizes Applet2 is triggered 4- No exception is thrown 5- No exception is thrown Applet2 finalizes	
11	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_USER_ACTIVITY		
	1- Envelope event download user activity is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- No exception is thrown 3- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler	4- No exception is thrown 5- No exception is thrown Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
12	Proactive Response Handler availability with EVENT_EVENT_DOWNLOAD_CARD_READER_ STATUS		
	1-Envelope event download card reader status is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- No exception is thrown	
	3- Applet1 gets the Proactive Response Handler	3- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler	4- No exception is thrown	
	5- Applet2 gets the Proactive Response Handler	5- No exception is thrown	
		Applet2 finalizes	
13	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CARD_READER_ STATUS		
	1- Envelope event download card reader status is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- No exception is thrown 3- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler	4- No exception is thrown 5- No exception is thrown	
		Applet2 finalizes	
14	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_LANGUAGE_SEL ECTION		
	1- Envelope event download language selection is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- No exception is thrown 3- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler	4- No exception is thrown 5- No exception is thrown	
		Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
15	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_BROWSER_TER MINATION		
	1- Envelope event download browser termination is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- No exception is thrown 3- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler	4- No exception is thrown 5- No exception is thrown	
		Applet2 finalizes	
16	Proactive Handler availability with EVENT_STATUS_COMMAND		
	1- Status command is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- No exception is thrown 3- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler	4- No exception is thrown 5- No exception is thrown	
		Applet2 finalizes	
17	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_DATA_AVAILABL E		
	1- Applet1 builds a proactive command OPEN CHANNEL proactiveHandler.send() method is called.		1- OPEN CHANNEL proactive command is fetched
	2- An Envelope Event Download Data Available is sent to the UICC, with channelId=01.	2- Applet1 is triggered	TERMINAL RESPONSE is issued with Channel Id = 01
	3- Applet1 gets the Proactive Handler 4- Applet1 gets the Proactive Response Handler	3- No exception is thrown 4- No exception is thrown	
		Applet1 finalizes	
18	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_CHANNEL_STAT US		
	1- An Envelope Event Download Channel Status is sent to the UICC, with ChannelId=01	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- No exception is thrown 3- No exception is thrown	
		Applet1 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
19	Proactive Handler availability with		•
	UNRECOGNIZED_ENVELOPE		
	1- An unrecognized Envelope (BER TLV Tag unrecognized) is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- No exception is thrown 3- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler	4- No exception is thrown 5- No exception is thrown	
		Applet2 finalizes	
20	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_ACCESS_TECHN OLOGY_CHANGE 1- An envelope event download access	1- Applet1 is triggered	
	technology change is sent to the UICC 2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response	2- No exception is thrown 3- No exception is thrown	
	Handler	Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler	4- No exception is thrown 5- No exception is thrown	
21	Proactive Handler availability with	Applet2 finalizes	
21	EVENT_EVENT_DOWNLOAD_DISPLAY_PARAM ETERS_CHANGED		
	1- An envelope event download display parameter changed is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- No exception is thrown 3- No exception is thrown	
		SERVICE (add) proactive	4- DECLARE SERVICE (add) proactive command is fetched
			Successful TERMINAL RESPONSE is issued
	5- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
	6- Applet2 gets the Proactive Response Handler	5- No exception is thrown 6- No exception is thrown	
		Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
22	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_LOCAL_CONNEC TION 1- An envelope event download local connection is sent to the UICC, with the allocated service identifier	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- No exception is thrown 3- No exception is thrown Applet1 finalizes	
23	Proactive Handler availability with EVENT_PROACTIVE_HANDLER_AVAILABLE		
	1- Envelope event download call connected is sent to the UICC	1- Applet1 is triggered and registers to EVENT_PROACTIVE_HANDLER_ AVAILABLE	
	2- The display Text proactive command is fetch and the terminal response is sent	Applet1 finalizes Applet2 is triggered, registers to EVENT_PROACTIVE_HANDLER_ AVAILABLE and sends a Display Test proactive command 2- Applet1 is triggered by	
	3- Applet1 gets the Proactive Handler 4- Applet1 gets the Proactive Response Handler	EVENT_PROACTIVE_HANDLER_ AVAILABLE 3- No exception is thrown 4- No exception is thrown	
	5- Applet2 gets the Proactive Handler 6- Applet2 gets the Proactive Response Handler	Applet1 finalizes Applet2 is triggered by EVENT_PROACTIVE_HANDLER_ AVAILABLE 4- No exception is thrown 5- No exception is thrown	
		Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
24	Proactive Handler availability with		•
	EVENT_APPLICATION_DESELECT		
	1- Select for activation ADF1		
	2- Select for termination ADF1	2- Applet1 is triggered	
	3- Applet1 gets the Proactive Handler 4- Applet1 gets the Proactive Response Handler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown. 4- A ToolkitException HANDLER_NOT_AVAILABLE is	
	Applet1 deregisters to EVENT_APPLICATION_DESELECT.	thrown Applet1 finalizes Applet2 is triggered	
	5-Applet2 gets the Proactive Handler	5- A ToolkitException HANDLER_NOT_AVAILABLE is	
	6-Applet2 gets the Proactive Response Handler	thrown 6- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	Applet2 deregisters to EVENT_APPLICATION_DESELECT.	Applet2 finalizes	
25	The ProactiveHandler is not available before the Terminal Profile with EVENT_MENU SELECTION_HELP_REQUEST		
	1- Reset the card without sending the Terminal Profile		
	2- Envelope menu selection with help request is sent to the UICC	2- Applet1 is triggered	
	3- Applet1 gets the Proactive Handler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	4- Applet1 gets the Proactive Response Handler	4- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes	
26	The ProactiveHandler is not available before the Terminal Profile with EVENT_MENU SELECTION		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
	3- Applet1 gets the Proactive Response Handler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
27	The ProactiveHandler is not available before the Terminal Profile with EVENT_TIMER_EXPIRATION		
	1- Timer Id =1 Envelope Timer Expiration is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
	3- Applet1 gets the Proactive Response Handler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes	
28	The ProactiveHandler is not available before the Terminal Profile with EVENT_CALL_CONTROL_BY_NAA		
	1- Envelope call control by NAA is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
	3- Applet1 gets the Proactive Response Handler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes	
29	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_MT_CALL		
	1- Envelope event download mt call is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is	
	3- Applet1 gets the Proactive Response Handler	thrown 3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
	4- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered 4- A ToolkitException	
	5- Applet2 gets the Proactive Response Handler	HANDLER_NOT_AVAILABLE is thrown 5-A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
30	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED		
	1- Envelope event download call connected is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown 3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler	Applet1 finalizes Applet2 is triggered 4- A ToolkitException HANDLER_NOT_AVAILABLE is thrown 5-A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet2 finalizes	
31	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_CALL_DISCONNE CTED		
	1- Envelope event download call disconnected is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown 3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler	Applet1 finalizes Applet2 is triggered 4- A ToolkitException HANDLER_NOT_AVAILABLE is thrown 5-A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
32	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_LOCATION_STAT US		
	1- Envelope event download location status is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is	
	3- Applet1 gets the Proactive Response Handler	thrown 3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler	4- A ToolkitException HANDLER_NOT_AVAILABLE is thrown 5- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	
33	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_USER_ACTIVITY		
	1- Envelope event download user activity is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is	
	3- Applet1 gets the Proactive Response Handler	thrown 3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
	4- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
	5- Applet2 gets the Proactive Response Handler	4- A ToolkitException HANDLER_NOT_AVAILABLE is thrown 5-A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
34	The ProactiveHandler is not available before the	•	•
	Terminal Profile with EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_A VAILABLE		
	1- Envelope event download idle screen available is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is	
	3- Applet1 gets the Proactive Response Handler	thrown 3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	4- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
	5- Applet2 gets the Proactive Response Handler	4- A ToolkitException HANDLER_NOT_AVAILABLE is thrown 5- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet2 finalizes	
35	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_CARD_READER_ STATUS		
	1- Envelope event download card reader status is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is	
	3- Applet1 gets the Proactive Response Handler	thrown 3-A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
	4- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
	5- Applet2 gets the Proactive Response Handler	4- A ToolkitException HANDLER_NOT_AVAILABLE is thrown 5- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
36	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_LANGUAGE_SEL ECTION		
	1- Envelope event download language selection is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is	
	3- Applet1 gets the Proactive Response Handler	thrown 3A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler	4- A ToolkitException HANDLER NOT_AVAILABLE is	
	5- Applet2 gets the Proactive Response Handler	thrown 5-A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet2 finalizes	
37	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_BROWSER_TER MINATION		
	1- Envelope event download browser termination is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	3- Applet2 gets the Proactive Handler	Applet1 finalizes Applet2 is triggered	
		3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
38	The ProactiveHandler is not available before the Terminal Profile with EVENT_STATUS_COMMAND		
	1- Status command is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is	
	3- Applet1 gets the Proactive Response Handler	thrown 3-A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response	4- A ToolkitException HANDLER_NOT_AVAILABLE is	
	Handler	thrown 5A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet2 finalizes	
39	The ProactiveHandler is not available before the Terminal Profile with UNRECOGNIZED_ENVELOPE		
	1- An unrecognized Envelope (BER TLV Tag unrecognized) is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is	
	3- Applet1 gets the Proactive Response Handler	thrown 3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
	A local and a solar black December 19 and local	Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler5- Applet2 gets the Proactive Response	4- A ToolkitException HANDLER_NOT_AVAILABLE is	
	Handler	thrown 5- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
40	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_ACCESS_TECHN OLOGY_CHANGE		
	1- An envelope event download access technology change is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown 3-A ToolkitException HANDLER_NOT_AVAILABLE is	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler	thrown. Applet1 finalizes Applet2 is triggered 4- A ToolkitException HANDLER_NOT_AVAILABLE is thrown 5-A ToolkitException HANDLER_NOT_AVAILABLE is thrown. Applet2 finalizes	
41	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWN_DANGER		
	1- An envelope event download display parameter changed is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown 3-A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet1 registers to EVENT_PROACTIVE_HANDLER_ AVAILABLE then finalizes	
		Applet2 is triggered 4- A ToolkitException	
	4- Applet2 gets the Proactive Handler	HANDLER_NOT_AVAILABLE is thrown	
	5- Applet2 gets the Proactive Response Handler	5- A ToolkitException HANDLER_NOT_AVAILABLE is thrown. Applet2 registers to EVENT_PROACTIVE_HANDLER_ AVAILABLE then finalizes	
42	The ProactiveHandler is not available before the Terminal Profile with EVENT_PROACTIVE_HANDLER_AVAILABLE		
		Applet1 and Applet2 are not triggered by EVENT_PROACTIVE_HANDLER_AVAILABLE	

ld	Description	API/CAT RE Expectation	APDU Expectation
43	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_NETWORK_SE ARCH_MODE_CHANGE		
	1- Envelope event download network search mode change is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown 3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet1 deregisters from EVENT_PROACTIVE_HANDLER_AVAILABLE	
		Applet1 finalizes	
		Applet2 is triggered	
	4- Applet2 gets the Proactive Handler	4- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	5- Applet2 gets the Proactive Response Handler	5- A ToolkitException HANDLER_NOT_AVAILABLE is thrown. Applet2 deregisters from EVENT_PROACTIVE_HANDLER_ AVAILABLE	
		Applet2 finalizes	
44	The ProactiveHandler is not available before the Terminal Profile with EVENT_EVENT_DOWNLOAD_BROWSING STATUS		
	1- Envelope event download browsing status is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is	
	3- Applet1 gets the Proactive Response Handler	thrown 3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler	4- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	5- Applet2 gets the Proactive Response Handler	5- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
45	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_NETWORK_SEAR CH_MODE_CHANGE		·
	0- Reset card and sendTerminal Profile without facility SETUP_EVENT_LIST		
	1- Envelope event download network search mode change is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- No exception is thrown 3- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler	4- No exception is thrown 5- No exception is thrown	
	Handret	Applet2 finalizes	
46	Proactive Handler availability with EVENT_EVENT_DOWNLOAD_BROWSING STATUS		
	1- Envelope event download browsing status is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 gets the Proactive Handler 3- Applet1 gets the Proactive Response Handler	2- No exception is thrown 3- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	4- Applet2 gets the Proactive Handler 5- Applet2 gets the Proactive Response Handler	4- No exception is thrown 5- No exception is thrown	
		Applet2 finalizes	
47	The ProactiveHandler is not available outside the processToolkit() method		
	1- Install Applet3. In its install method, Applet3 gets the Proactive Handler and the Proactive Response Handler in a Try/Catch session	1- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	2- Select Applet3	2- Applet3 is triggered by its process() method	
	3- Applet3 gets the ProactiveHandler and the Proactive Response Handler.	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	

5.5.1.3 EnvelopeHandler

Test Area Reference: Cre_Mha_Enhd.

5.5.1.3.1 Conformance requirement

5.5.1.3.1.1 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_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_BY_NAA

EVENT_EVENT_DOWNLOAD_DATA_AVAILABLE

EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS

EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHANGE

EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CHANGED

EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION

EVENT_APPLICATION_DESELECT

EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_CHANGE

EVENT_EVENT_BROWSING_STATUS

EVENT_EXTERNAL_FILE_UPDATE

CRRN2: An EnvelopeHandler is considered available when no HANDLER_NOT_AVAILABLE
 ToolkitException is thrown when the corresponding getTheHandler() method is called or a method of the
 handler is called.

5.5.1.3.1.2 Parameter errors

No requirements.

5.5.1.3.1.3 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

EVENT_FIRST_COMMAND_AFTER_ATR

EVENT_PROACTIVE_HANDLER_AVAILABLE

• CRRC2: The EnvelopeHandler shall not be available if the *getTheHandler()* method is not called, directly or indirectly, from the applet's *processToolkit()* method.

5.5.1.3.2 Test area files

Test Source: Test_Cre_Mha_Enhd.java.

Test Applet: Cre_Mha_Enhd_1.java.

Cre_Mha_Enhd_2.java.

Cre_Mha_Enhd_3.java.

Cap File: Cre_Mha_Enhd.cap.

5.5.1.3.3 Test coverage

CRR Number	Test Case Number		
CRRN1	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 22, 24, 26, 27, 28,		
CRRN2	1 to 24, 26, 27, 28, 29		
CRRC1	1, 2, 16, 23		
CRRC2	25		

5.5.1.3.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet1 and Applet2 registration and Envelope Handler availability with EVENT_FIRST_COMMAND_AFTER_ATR		-
	1- Applet1 is registered to all events defined TS 102 241 [9] except to EVENT_PROACTIVE_HANDLER_AVAILABLE. The registration is done using the methods initMenuEntry() for EVENT_MENU_SELECTION, requestPollInterval() for EVENT_STATUS_COMMAND, allocateTimer() for EVENT_TIMER_EXPIRATION, allocateServiceIdentifier() for EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION and setEventList() for the rest of the events. Applet1 is registered on EVENT_EXTERNAL_FILE_UPDATE on update of EFTARU of the UICC file system	1- No exception is thrown	
	Applet2 is registered to all events defined TS 102 241 [9] except to EVENT_PROACTIVE_HANDLER_AVAILABLE and EVENT_CALL_CONTROL_BY_NAA . The registration is done 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 on EVENT_EXTERNAL_FILE_UPDATE on update of EFTARU of the UICC file system		
	2- Select MF.	2- Applet1 is triggered by EVENT_FIRST_COMMAND_AFTE R_ATR	
	3- EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 is deregistered from EVENT_FIRST_COMMAND_AFTER_ATR.	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	4- EnvelopeHandler.getTheHandler() method is called by Applet2 Applet2 is deregistered to EVENT_FIRST_COMMAND_AFTER_ATR.	Applet1 finalizes Applet2 is triggered 4- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet2 finalizes	
2	Handler availability with EVENT_PROFILE_DOWNLOAD		
	1- Terminal Profile command is sent to the UICC without the facility of SET_EVENT_LIST, SETUP_IDLE_MODE_TEXT, POLL_INTERVAL and SETUP MENU	1- Applet1 is triggered by EVENT_PROFILE_DOWNLOAD	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1 Applet1 is deregistered to EVENT_PROFILE_DOWNLOAD	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes Applet2 is triggered by EVENT_PROFILE_DOWNLOAD	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2 Applet2 is deregistered to EVENT_PROFILE_DOWNLOAD	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
3	Envelope Handler availability with EVENT_MENU_SELECTION_HELP_REQUEST		
	Perform UICC initialization with all the facilities supported		
	1- Envelope menu selection with help request is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown	
4	Envelope Handler availability with	Applet1 finalizes	
-	EVENT_MENU_SELECTION		
	1- Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method	2- No exception is thrown	
	is called by Applet1	Applet1 finalizes	
5	Envelope Handler availability with EVENT_TIMER_EXPIRATION		
	Timer id=1 1- Envelope Timer Expiration is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown	
		Applet1 finalizes	
6	Envelope Handler availability with EVENT_CALL_CONTROL_BY_NAA		
	1- Envelope call control by NAA is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown Applet1 finalizes	
7	Envelope Handler availability with EVENT_EVENT_DOWNLOAD_MT_CALL		
	1- Envelope event download mt call is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method	2- No exception is thrown	
	is called by Applet1	Applet1 finalizes Applet2 is triggered	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2	3- No exception is thrown Applet2 finalizes	
8	Envelope Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED		
	1- Envelope event download call connected is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2	3- No exception is thrown Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
9	Envelope Handler availability with		
	EVENT_EVENT_DOWNLOAD_CALL_DISCONE CTTED		
	1- Envelope event download call disconnected is sent to the UICC	1- Applet1 is triggered.	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown	
	is carred by Appreci	Applet1 finalizes Applet2 is triggered	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2	3- No exception is thrown Applet2 finalizes	
10	Envelope Handler availability with EVENT_EVENT_DOWNLOAD_LOCATION_STA TUS		
	1- Envelope event download location status is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown	
	3- EnvelopeHandler.getTheHandler() method	Applet1 finalizes Applet2 is triggered 3- No exception is thrown Applet2 finalizes	
11	is called by Applet2 Envelope Handler availability with		
	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY		
	1- Envelope event download user activity is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown Applet1 finalizes Applet2 is triggered	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2	3- No exception is thrown Applet2 finalizes	
12	Envelope Handler availability with EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_ AVAILABLE		
	1- Envelope event download idle screen available is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown Applet1 finalizes Applet2 is triggered	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2	3- No exception is thrown Applet2 finalizes	
13	Envelope Handler availability with EVENT_EVENT_DOWNLOAD_CARD_READER _STATUS		
	1- Envelope event download card reader status is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2	Applet1 finalizes Applet2 is triggered 3- No exception is thrown Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
14	Envelope Handler availability with EVENT_EVENT_DOWNLOAD_LANGUAGE_ SELECTION		
	1- Envelope event download language selection is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2	3- No exception is thrown Applet2 finalizes	
15	Envelope Handler availability with EVENT_EVENT_DOWNLOAD_BROWSER_ TERMINATION		
	1- Envelope event download browser termination is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2	3- No exception is thrown Applet2 finalizes	
16	Envelope Handler availability with EVENT_STATUS_COMMAND		
	1- Status command is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes Applet2 is triggered	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet2 finalizes	
17	Envelope Handler availability with EVENT_EVENT_DOWNLOAD_DATA_AVAILAB LE		
	1- Applet1 builds a proactive command OPEN CHANNEL. proactiveHandler.send() method is called	1- Applet1 is registered to EVENT_EVENT_DOWNLOAD_DA TA_AVAILABLE and EVENT_EVENT_DOWNLOAD_CH ANNEL_STATUS	proactive command is
	2- Envelope event download data available is sent to the UICC with ChannelId=01.	2- Applet1 is triggered	issued with Channel Id = 01
	3- EnvelopeHandler.getTheHandler() method is called by Applet1	3- No exception is thrown Applet1 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
18	Envelope Handler availability with	74 JON NE EXPONENTIAL	711 DO EXPOSIGNON
	EVENT_EVENT_DOWNLOAD_CHANNEL_STAT		
	US		
	1- Envelope event download channel status is sent to the UICC with ChannelId=01.	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown Applet1 finalizes	
19	Envelope Handler availability with EVENT_ UNRECOGNIZED_ENVELOPE		
	1- An unrecognized Envelope is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown	
		3- Applet1 sends a DECLARE SERVICE (add) proactive command with its service identifier	3- DECLARE SERVICE (add) proactive command is fetched
			Successful TERMINAL RESPONSE is issued
		Applet1 finalizes Applet2 is triggered	
	4- EnvelopeHandler.getTheHandler() method is called by Applet2	4- No exception is thrown Applet2 finalizes	
20	Envelope Handler availability with EVENT_EVENT_DOWNLOAD_LOCAL_CONNE CTION		
	1- Envelope event download local connection is sent to the UICC with the allocated service Id of Applet1	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown Applet1 finalizes	
21	Envelope Handler availability with EVENT_EVENT_DOWNLOAD_ACCESS_TECHN OLOGY_CHANGE		
	1- Envelope event download access technology change is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown Applet1 finalizes Applet2 is triggered	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2	3- No exception is thrown Applet2 finalizes	
22	Envelope Handler availability with EVENT_EVENT_DOWNLOAD_DISPLAY_PARA METERS_CHANGED		
	1- Envelope event display parameter changed is sent to the UICC	1- Applet1 is triggered and registers to	
	2. Envelopellandler actual attendation (1) and 1	EVENT_PROACTIVE_HANDLER_ AVAILABLE	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown Applet1 finalizes Applet2 is triggered and registers to EVENT_PROACTIVE_HANDLER_ AVAILABLE	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2	3- No exception is thrown Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
23	Envelope Handler availability with	A VOAT RE Expositation	Al Do Expositation
	EVENT_PROACTIVE_HANDLER_AVAILABLE		
		1- Applet1 is triggered by EVENT_PROACTIVE_HANDLER_AVAILABLE	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes Applet2 is triggered by EVENT_PROACTIVE_HANDLER_ AVAILABLE	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet2 finalizes	
24	Envelope Handler availability with EVENT_APPLICATION_DESELECT		
	1- Select for activation ADF1		
	2- Select for termination ADF1	2- Applet1 is triggered	
	3- EnvelopeHandler.getTheHandler() method is called by Applet1. Applet1 deregisters to	3- No exception is thrown	
	EVENT_APPLICATION_DESELECT.	Applet1 finalizes Applet2 is triggered	
	4- EnvelopeHandler.getTheHandler() method is called by Applet2.	4- No exception is thrown	
	Applet1 deregisters to EVENT APPLICATION DESELECT.	Applet2 finalizes	
25	Envelope Handler availability with EVENT_EVENT_DOWNLOAD_NETWORK_SEA RCH_MODE_CHANGE		
	1- Envelope event download network search mode change is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2	3- No exception is thrown	
		Applet2 finalizes	
26	Envelope Handler availability with EVENT_EVENT_BROWSING_STATUS		
	1- Envelope event download browsing status is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeHandler.getTheHandler() method is called by Applet1	2- No exception is thrown Applet1 finalizes Applet2 is triggered	
	3- EnvelopeHandler.getTheHandler() method is called by Applet2	3- No exception is thrown Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
27	The EnvelopeHandler is not available outside		
	the processToolkit() method		
	1- Install Applet3. In its install method, Applet3 gets the EnvelopeHandler in a Try/Catch session	1- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	2- Select Applet3	2- Applet3 is triggered by its process() method	
	3- Applet3 gets the EnvelopeHandler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	

5.5.1.4 EnvelopeResponseHandler

Test Area Reference: Cre_Mha_Erhd

5.5.1.4.1 Conformance requirement

5.5.1.4.1.1 Normal execution

• CRRN1: The handler is available for all triggered toolkit applets from the invocation of the processToolkit method of the toolkit applet until a toolkit applet has posted an envelope response or the first invocation of the ProactiveHandler.send method for the following events:

EVENT_CALL_CONTROL_BY_NAA

EVENT_UNRECOGNIZED_ENVELOPE

- CRRN2: After a call to the post method the handler is not longer available.
- CRRN3: After a call to the send method the handler is not longer available.
- CRRN4: An EnvelopeResponseHandler is considered available when no HANDLER_NOT_AVAILABLE
 ToolkitException is thrown when the corresponding getTheHandler() method is called or a method of the
 handler is called.

5.5.1.4.1.2 Parameter errors

No requirements.

5.5.1.4.1.3 Context errors

• CRRC1: The handler is not available for the following events:

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_STATUS_COMMAND

EVENT_PROFILE_DOWNLOAD

EVENT_FIRST_COMMAND_AFTER_ATR

EVENT_EVENT_DOWNLOAD_DATA_AVAILABLE

EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS

EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHANGE

EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CHANGED

EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION

EVENT_APPLICATION_DESELECT

EVENT_PROACTIVE_HANDLER_AVAILABLE

 ${\tt EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_CHANGE}$

EVENT_EVENT_BROWSING_STATUS

EVENT_EXTERNAL_FILE_UPDATE

• CRRC2: The EnvelopeResponseHandler shall not be available if the *getTheHandler()* method is not called, directly or indirectly, from the applet's *processToolkit()* method.

5.5.1.4.2 Test area files

Test Source: Test_Cre_Mha_Erhd.java.

Test Applet: Cre_Mha_Erhd_1.java.

Cre_Mha_Erhd_2.java.

Cre_Mha_Erhd_3.java.

Cap File: Cre_Mha_Erhd.cap.

5.5.1.4.3 Test coverage

CRR Number	Test Case Number
CRRN1	18, 19, 20, 21
CRRN2	18, 19
CRRN3	18, 19
CRRN4	1 to 29
CRRC1	1 to 17 and 22 to 25, 26, 27, 28
CRRC2	29

5.5.1.4.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Toolkit Applet1 and Toolkit Applet2 registration and Envelope Response Handler availability with		
	EVENT_FIRST_COMMAND_AFTER_ATR		
	1- Applet1 is registered to all events defined in TS 102 241 [9] except EVENT_PROACTIVE_HANDLER_AVAILABLE. Using the methods initMenuEntry() for EVENT_MENU_SELECTION, requestPollInterval() for EVENT_STATUS_COMMAND, allocateTimer() for EVENT_TIMER_EXPIRATION,	1- No exception is thrown	
	allocateServiceIdentifier() for EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION and setEventList() for the rest of the events. Applet1 is registered on EVENT_EXTERNAL_FILE_UPDATE on update of EFTARU of the UICC file system		
	Applet2 is registered to EVENT_UNRECOGNIZED_ENVELOPE.		
	2- Select MF.	2- Applet1 is triggered by EVENT_FIRST_COMMAND_AFTE R_ATR	
	3- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	Applet1 is deregistered to EVENT FIRST COMMAND AFTER ATR.	Applet1 finalizes	
2	Handler availability with EVENT_PROFILE_DOWNLOAD		
	1- Terminal Profile command is sent to the UICC without the facility of SET_EVENT_LIST, SETUP_IDLE_MODE_TEXT, SETUP_MENU and POLL_INTERVAL.	1- Applet1 Is Triggered By EVENT_PROFILE_DOWNLOAD	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1 Applet1 is deregistered to EVENT_PROFILE_DOWNLOAD	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes	
3	Envelope Response Handler availability with EVENT_MENU_SELECTION_HELP_REQUEST		
	Perform UICC initialization with all the facilities supported, except facility SET UP EVENT LIST		
	1- Envelope menu selection with help request is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes	
4	Envelope Response Handler availability with EVENT_MENU_SELECTION		
	1- A envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
5	Envelope Response Handler availability with		•
	EVENT_TIMER_EXPIRATION		
	1- Envelope Timer Expiration is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
6	Envelope Response Handler availability with EVENT_EVENT_DOWNLOAD_MT_CALL		
	1- Envelope event download mt call is sent to the UICC	T-Applet is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes	
7	Envelope Response Handler availability with EVENT_EVENT_DOWNLOAD_CALL_CONNECT ED		
	1- Envelope event download call connected is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes	
8	Envelope Response Handler availability with EVENT_EVENT_DOWNLOAD_CALL_DISCONN ECTED		
	1- Envelope event download call disconnected is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		Applet1 finalizes	
9	Envelope Response Handler availability with EVENT_EVENT_DOWNLOAD_LOCATION_STA TUS		
	1- Envelope event download location status is sent to the UICC	1- Applet1 is triggered	
	2- Applet1 obtains the Envelope Response Handler	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes	
10	Envelope Response Handler availability with EVENT_EVENT_DOWNLOAD_USER_ACTIVITY		
	1- Envelope event download user activity is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes	

Id	APDU Expectation
1- Envelope event download idlo garcon	
1- Envelope event download idle screen available is sent to the UICC 1- Applet1 is triggered	
2- EnvelopeResponseHandler.getTheHandler()	
method is called by Applet1 HANDLER_NOT_AVAILABLE is thrown	
Applet1 finalizes	
12 Envelope Response Handler availability with EVENT_EVENT_DOWNLOAD_CARD_READER	
_STATUS	
1- Envelope event download card reader	
status is sent to the UICC 1- Applet1 is triggered	
2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1 2- A ToolkitException	
HANDLER_NOT_AVAILABLE is	
thrown	
Applet1 finalizes	
13 Envelope Response Handler availability with	
EVENT_EVENT_DOWNLOAD_LANGUAGE_ SELECTION	
1- Envelope event download language selection is sent to the UICC 1- Applet1 is triggered	
2- EnvelopeResponseHandler.getTheHandler()	
method is called by Applet1 HANDLER_NOT_AVAILABLE is thrown	
Applet1 finalizes 14 Envelope Response Handler availability with	
EVENT_EVENT_DOWNLOAD_BROWSER_	
TERMINATION	
1- Envelope event download browser 1- Applet1 is triggered	
termination is sent to the UICC 2. Envolone Regnerace Handler (setThe Handler ()) 2. A Toolkit Exception	
2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1 HANDLER_NOT_AVAILABLE is	
thrown Applet1 finalizes	
15 Envelope Response Handler availability with	
EVENT_STATUS_COMMAND 1- Applet1 is triggered	
1- Status command is sent to the UICC	
2- EnvelopeResponseHandler.getTheHandler() HANDLER_NOT_AVAILABLE is	
thrown	
Applet1 finalizes 16 Envelope Response Handler availability with	
EVENT_EVENT_DOWNLOAD_DATA_AVAILAB	
LE	
ODEN CHANNEL and gallg the gond() method	e OPEN CHANNEL nand is fetched
TERM	MINAL RESPONSE IS
	T TO THE UICC with nel Id=01
	iici iu–u i
2- Envelope event download data avalaible is sent to the UICC with channelId=01 2- Applet1 is triggered	
3- A ToolkitException 3- EnvelopeResponseHandler.getTheHandler()	
method is called by Applet1 HANDLER_NOT_AVAILABLE is thrown	
Applet1 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
17	Envelope Response Handler availability with EVENT_EVENT_DOWNLOAD_CHANNEL_STAT US		
	1- Envelope event download channel status is sent to the UICC with channelId=01	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes	
18	Envelope Response Handler availability with EVENT_CALL_CONTROL_BY_NAA		
	1- Envelope call control by NAA is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- No exception is thrown	
	3- Applet1 builds the envelope response and it calls the postAsBERTLV() method 4- Applet1 calls all methods of the Envelope Response Handler (including the inherited method)	4- ToolkitException HANDLER_NOT_AVAILABLE is thrown for each method Applet1 finalizes	3- The envelope response is sent
	5- Envelope call control by NAA is sent to the UICC	5- Applet1 is triggered	
	6- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	6- No Exception is thrown	
	7- Applet1 builds a proactive command and it calls the send() method		7- The proactive command is fetched and the Terminal response is issued
	8- Applet1 calls all methods of the Envelope Response Handler (including the inherited method)	8- A ToolkitException HANDLER_NOT_AVAILABLE is thrown for each method	response is issued
		Applet1 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
19	Envelope Response Handler availability with EVENT_UNRECOGNIZED_ENVELOPE		
	1- An unrecognized Envelope is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- No exception is thrown	
	3- Applet1 builds the envelope response and it calls the postAsBERTLV() or post method		3- The envelope response is sent
	4-Applet1 calls all methods of Envelope Response Handler (including the inherited method)	4- A ToolkitException HANDLER_NOT_AVAILABLE is thrown for each method	
		Applet1 finalizes Applet2 is triggered	
	5- EnvelopeResponseHandler.getTheHandler() method is called	5- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet2 finalizes	
	6- An unrecognized Envelope is sent to the UICC	6- Applet1 is triggered	
	7- EnvelopeResponseHandler.getTheHandler() method is called	7- No exception is thrown	
	8- Applet1 builds a proactive command and it calls the send() method		
	9- Applet1 calls all methods of the Envelope Response Handler (including the inherited method)	9- A ToolkitException HANDLER_NOT_AVAILABLE is thrown for each method	9- The proactive command is fetched and the Terminal response is issued
		Applet1 finalizes Applet2 is triggered	
	10- EnvelopeResponseHandler.getTheHandler() method is called by Applet2	10- A ToolkitException HANDLER_NOT_AVAILABLE is thrown.	
		Applet2 finalizes	
20	The envelope response is sent when a proactive session is ongoing		
	1- An unrecognized envelope is sent to the UICC.	1- Applet1 is triggered.	
	2- Proactive command DISPLAY TEXT is built and it calls the send() method.		2- 91 XX
	3- A call control by NAA envelope is sent to the UICC.	3- Applet1 is triggered	
	4- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	4- No exception is thrown	
	5- Applet1 builds the envelope response and it calls the postAsBERTLV()		5- The envelope response is checked Expected SW = 91 XX Fetch DISPLAY TEXT Terminal Response DISPLAY TEXT

ld	Description	API/CAT RE Expectation	APDU Expectation
21	Envelope Response Handler availability with		-
	EVENT_UNRECOGNIZED_ENVELOPE in case		
	of multi-triggering		
	1- An unrecognized Envelope is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- No exception is thrown	
		Applet1 finalizes Applet2 is triggered	
	3- EnvelopeResponseHandler.getTheHandler() method is called by Applet2	3- No Exception is thrown	
		Applet2 finalizes	
22	Envelope Response Handler availability with EVENT_EVENT_DOWNLOAD_ACCESS_TECHN OLOGY_CHANGE		
	1- Envelope event download access technology change is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes	
23	Envelope Response Handler availability with		
	EVENT_EVENT_DOWNLOAD_DISPLAY_PARA METERS_CHANGED		
	1- Envelope event download display parameter changed is sent to the UICC	1- Applet1 is triggered and registers to EVENT_PROACTIVE_HANDLER_ AVAILABLE	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes	
24	Envelope Response Handler availability with EVENT_PROACTIVE_HANDLER_AVAILABLE		
		1- Applet1 is triggered by EVENT_PROACTIVE_HANDLER_AVAILABLE	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
		3- Applet1 sends a DECLARE SERVICE (add) proactive command with its service identifier	3- DECLARE SERVICE (add) proactive command is fetched
		Applet1 finalizes	Successful TERMINAL RESPONSE is issued

ld	Description	API/CAT RE Expectation	APDU Expectation
25	Envelope Response Handler availability with EVENT_EVENT_DOWNLOAD_LOCAL_CONNA CTION		
	1- Envelope event download local connection is sent to the UICC with the allocated service Id of Applet1	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes	
26	Envelope Response Handler availability with EVENT_APPLICATION_DESELECT		
	1- Select for activation ADF1 2- Select for termination ADF1	2- Applet1 is triggered	
	3- EnvelopeResponseHandler.getTheHandler() method is called by Applet1 Applet1 deregisters to EVENT APPLICATION DESELECT	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes	
27	Envelope Response Handler availability with EVENT_EVENT_DOWNLOAD_NETWORK_SEA RCH_MODE_CHANGE		
	1- Envelope event download network search mode change is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes	
28	Envelope Response Handler availability with EVENT_EVENT_BROWSING_STATUS		
	1- Envelope event download browsing status is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler() method is called by Applet1	2- A ToolkitException HANDLER_NOT_AVAILABLE is thrown Applet1 finalizes	
29	The EnvelopeResponseHandler is not available outside the processToolkit() method		
	1- Install Applet3. In its install method, Applet3 gets the EnvelopeResponseHandler in a Try/Catch session	1- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	
	2- Select Applet3	2- Applet3 is triggered by its process() method	
	3- Applet3 gets the EnvelopeResponseHandler	3- A ToolkitException HANDLER_NOT_AVAILABLE is thrown	

5.5.2 Handler Integrity

5.5.2.1 ProactiveHandler

Test Area Reference: Cre_Hin_Pahd.

5.5.2.1.1 Conformance requirement

5.5.2.1.1.1 Normal execution

- CRRN1: At the processToolkit invocation the TLV-List is cleared.
- CRRN2: After a call to *ProactiveHandler.send()* method the content of the handler shall not be modified by the CAT Runtime Environment.
- CRRN3: At the call of its init method the content is cleared and then initialized.

5.5.2.1.1.2 Parameter errors

No requirements.

5.5.2.1.1.3 Context errors

No requirements.

5.5.2.1.2 Test area files

Test Source: Test_Cre_Hin_Pahd.java.

Test Applet: Cre_Hin_Pahd_1.java.

Cre_Hin_Pahd_2.java.

Cap File: Cre_Hin_Pahd.cap.

5.5.2.1.3 Test coverage

CRR Number	Test Case Number	
CRRN1	1, 2, 3, 4	
CRRN2	3	
CRRN3	5	

5.5.2.1.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	At the processToolkit invocation the TLV-List		
	is cleared		
	Applet1 and Applet2 are registered to		
	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY.		
	1-An envelope containing an event download		
	user activity is sent to the UICC	1- Applet1 is triggered.	
	2-ProactiveHandler.getLength() method is	2- The return value is 0	
	called by Applet1		
2	TLV-List change after the init method invocation		
	invocation		
	ProactiveHandler.init() method is called		
	by Applet1		
	1-ProactiveHandler.getLength() method is	1- The return value is 9	
3	called by Applet1 The TLV-List remains unchanged after the		
3	send() method invocation		
	, and the second		
	<pre>1- ProactiveHandler.send() method is called by Applet1</pre>		1- The proactive command
	carrea by hppreci		is fetched and the terminal response is issued.
	2- ProactiveHandler.getLength() method is		response is issued.
	called by Applet1	2- The return value is 9, and its	
		contents is the same than before	
	It is checked that the content is the same	the calling to send method	
	than before the calling to send method		
	using ProactiveHandler.copy and Util.arrayCompare methods	Applet1 finalizes	
4	At the processToolkit invocation the TLV-List		
	is cleared		
		Applet2 is triggered	
		1- The return value is 0	
	<pre>1- ProactiveHandler.getLength() method is called by Applet2</pre>		
		2. TaplkitEvantian	
	2- ProactiveHandler.getValueLength() method is called by Applet2	2- ToolkitException UNAVAILABLE_ELEMENT is	
	meetica 12 carrea 2, imprece	thrown	

ld	Description	API/CAT RE Expectation	APDU Expectation
5	At the call of its init method the content is cleared and then initialized		
	1- proactiveHandler.init() method is called by Applet2	1- Check that the content of the proactive handler corresponds to the command defined by the parameters of the init() method	
	2- proactiveHandler.initCloseChannel() method is called by Applet2	2- Check that the content of the proactive handler corresponds to the close channel command	
	3- proactiveHandler.initDisplayText() method is called by Applet2	3- Check that the content of the proactive handler corresponds to the display text command	
	4- proactiveHandler.initGetInkey() method is called by Applet2	4- Check that the content of the proactive handler corresponds to the get inkey command	
	5- proactiveHandler.initGetInput() method is called by Applet2	5- Check that the content of the proactive handler corresponds to the get input command	
	6- ProactiveHandler.initMoreTime() method is called by Applet2	6- Check that the content of the proactive handler corresponds to the More Time command	
	7- proactiveHandler.init() method is called by Applet2	7- Check that the content of the proactive handler corresponds to the command defined by the parameters of the init() method	

5.5.2.2 ProactiveResponseHandler

Test Area Reference: Cre_Hin_Prhd.

5.5.2.2.1 Conformance requirement

5.5.2.2.1.1 Normal execution

- CRRN1: The *ProactiveResponseHandler* content shall be updated after each successful call to *ProactiveHandler.send()* method and shall remain unchanged until the next successful call to the *ProactiveHandler.send()* method.
- CRRN2: The ProactiveResponseHandler TLV list is filled with the comprehension TLV data objects of the last TERMINAL RESPONSE APDU command.
- CRRN3: The comprehension TLV data objects shall be provided in the order given in the TERMINAL RESPONSE command data.
- CRRN4: The ProactiveResponseHandler TLV list shall be empty before the first call to the ProactiveHandler.send() method.

5.5.2.2.1.2 Parameter errors

No requirements.

5.5.2.2.1.3 Context errors

No requirements.

5.5.2.2.2 Test area files

Test Source: Test_Cre_Hin_Prhd.java.

Test Applet: Cre_Hin_Prhd_1.java.

Cap File: Cre_Hin_Prhd.cap.

5.5.2.2.3 Test coverage

CRR Number	Test Case Number
CRRN1	1, 2
CRRN2	2
CRRN3	2
CRRN4	1

5.5.2.2.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration and ProactiveResponseHandler obtaining		
	1- Applet is registered to all events defined in ETSI TS 102 241[13] except to EVENT_FIRST_COMMAND_AFTER_ATR, EVENT_PROACTIVE_HANDLER_AVAILABLE and EVENT_APPLICATION_DESELECT.	1- No exception is thrown	
	Using the methods initMenuEntry for EVENT_MENU_SELECTION and EVENT_MENU_SELECTION_HELP_REQUEST requestPollInterval() for		
	EVENT_STATUS_COMMAND, allocateTimer() for EVENT_TIMER_EXPIRATION, allocateServiceIdentifier() for EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION and setEventList() for the rest of the events.		
	Applet is registered on EVENT_EXTERNAL_FILE_UPDATE on update of EFTARU of the UICC file system		
	Terminal Profile command is sent to the UICC without the facilities of SETUP_EVENT_LIST, SETUP_IDLE_MODE_TEXT, SETUP_MENU and POLL_INTERVAL.		
	2- For each event/triggering:	2- Applet is triggered. For the first triggering, the applet registers to EVENT_PROACTIVE_HANDLER_ AVAILABLE	
	3- ProactiveResponseHandler.getTheHandler() is called	3- No exception is thrown	
	4- ProactiveResponseHandler.getLength() is called	4- The return value is 0	

ld	Description	API/CAT RE Expectation	APDU Expectation
2	The ProactiveResponseHandler remains unchanged after send() method invocation until next send() method invocation		
	1- Applet builds a proactive command then the ProactiveHandler.send() method is called		1- A proactive command is fetched The terminal response is sent with length 12
	2- proactiveResponseHandler.getTheHandler() method is called	2- The ProactiveResponseHandler contains the terminal response. Comprehension TLV are provided in the order of the Terminal Response APDU	
	3-ProactiveResponseHandler.getLength() method is called	3- The return value is 12	
	4-ProactiveHandler.init() method is called	4- No exception is thrown and the Proactive Response Handler remains unchanged	
	5-ProactiveHandler.send() method is called		5- A proactive command is fetched The terminal response is sent
	6- proactiveResponseHandler.getTheHandler() method is called	6- The ProactiveResponseHandler contains the terminal response of the second proactive command. Comprehension TLV are provided in the order of the Terminal Response APDU	with length 15
	7-ProactiveResponseHandler.getLength() method is called	7- The return value is 15	

5.5.2.3 EnvelopeHandler

Test Area Reference: Cre_Hin_Enhd.

5.5.2.3.1 Conformance requirement

5.5.2.3.1.1 Normal execution

- CRRN1: When available, the *EnvelopeHandler* shall remain available and its content shall remain unchanged from the invocation to the termination of the *processToolkit()* method.
- CRRN2: The EnvelopeHandler TLV list is filled with the Comprehension TLV data objects of the ENVELOPE APDU command. The Comprehension TLV data objects shall be provided in the order given in the ENVELOPE command data.
- CRRN3: When an applet is triggered by the *EVENT_EXTERNAL_FILE_UPDATE* event, the system Envelope Handler shall be available
- CRRN4: When an applet is triggered by the *EVENT_EXTERNAL_FILE_UPDATE* event, the Envelope Handler shall contains the following COMPREHENSION TLVs (the order of the TLVs given in the system EnvelopeHandler is not specified):
 - Device Identity with source set to terminal and destination set to UICC, as defined in ETSI TS 102 223 [6];
 - File List, as defined in ETSI TS 102 223 [6]. The number of files shall be set to one. If a SFI referencing is used in the APDU Command, it shall be converted to its File Identifier;

- AID of the ADF, as defined in ETSI TS 102 223 [6], if the updated file belongs to an ADF. In this case, the path '3F007FFF' given in the File List indicates the ADF of the UICC application given through the AID. If the updated file belongs to the UICC shared file system, the AID TLV object is not present;
- File Update Information object.

Byte(s)	Description	Length
1	File Update Information tag	1
2	Length = 4	1
3 to 4	Position	2
5 to 6	Number of bytes updated	2

Position depends on the file type:

In case of transparent file, Position = Offset

In case of record file, Position = Absolute Record number

For the INCREASE APDU, the number of bytes updated is the record length.

• CRRN5: The value returned upon a *getTag()* method invocation is equal to the BER-TLV tag for intra-UICC communication, as defined in ETSI TS 101 220 [4].

5.5.2.3.1.2 Parameter errors

No requirements.

5.5.2.3.1.3 Context errors

No requirements.

5.5.2.3.2 Test area files

Test Source: Test_Cre_Hin_Enhd.java.

Test Applet: Cre_Hin_Enhd_1.java.

Cap File: Cre_Hin_Enhd.cap.

5.5.2.3.3 Test coverage

CRR Number	Test Case Number
CRRN1	1 to 21
CRRN2	1 to 21
CRRN3	22, 23
CRRN4	22, 23
CRRN5	1

5.5.2.3.4 Test procedure

ld	Description	API/CAT RE 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 TS 102 241 [9] except EVENT_PROFILE_DOWNLOAD, EVENT_PROACTIVE_HANDLER_AVAILABLE and EVENT_STATUS_COMMAND. Using the methods initMenuEntry() for EVENT_MENU_SELECTION and EVENT_MENU_SELECTION_HELP_REQUEST, allocateTimer() for EVENT_TIMER_EXPIRATION, allocateServiceIdentifier() for EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION and setEventList() for the rest of the events. Perform UICC initialization with all the facilities supported Applet is registered on EVENT_EXTERNAL_FILE_UPDATE on update of EFTARU of the UICC file system and on update	1-No exception is thrown 2- Applet is triggered	
	of EF_{LARU} of the ADF file system 2- Envelope menu selection with help	3- No exception is thrown.	
	request is sent to the UICC 3- EnvelopeHandler.getTheHandler() method is called	4- No exception is thrown	
	4- Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()		
	The EnvelopeHandler.findTLV() method is called with TAG_HELP_REQUEST		
	5- EnvelopeHandler.getTag() method is called		6- 91 xx.
	6- A proactive command DISPLAY TEXT is sent	5- 0xD3 is returned	
	7- Envelope call control by NAA is sent to UICC	7- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	8- It is checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	8- No exception is thrown and the handler contains the envelope call control by NAA	A proactive command Display Text is fetched
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		The terminal Response of DISPLAY TEXT is sent to
	Call Control execution is finished.		the UICC
	9- Check that the TAG_HELP_REQUEST is the TLV selected		
	10- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()	10- The contents of the envelope handler shall be the same as stored in buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
2	Envelope Handler integrity checks with EVENT_MENU_SELECTION		
	1- An envelope menu selection is sent to UICC	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 NAA is sent to UICC	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called	6- No exception is thrown and the	
	6- It is checked the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	handler contains the envelope call control by NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched The terminal Response of DISPLAY TEXT is sent to
	7- It is checked that the TAG_ITEM_IDENTIFIER is the TLV selected		the UICC
	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 buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
3	Envelope Handler integrity checks with EVENT_TIMER_EXPIRATION	·	·
	1- A timer expiration envelope is sent to UICC	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 NAA is sent to UICC	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called	6- No exception is thrown and the	
	6- It is checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	handler contains the envelope call control by NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		Proactive command Display Text is fetched
	7- It is checked that the TAG_TIMER_ID is the TLV selected	7- The contents of the envelope handler shall be the same as stored in buffer1	The terminal Response of DISPLAY TEXT is sent to the UICC
	8- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()		

ld	Description	API/CAT RE Expectation	APDU Expectation
4	Envelope Handler integrity checks with EVENT_CALL_CONTROL_BY_NAA	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	1- A call control envelope is sent to UICC	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 NAA is sent to UICC	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched
	7- It is checked that the TAG_ADDRESS is the TLV selected		The terminal Response of DISPLAY TEXT is sent to the UICC
	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 buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
5	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_MT_CALL		
	1- A event download mt call envelope is sent to UICC	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		4- 91 XX
	5- Envelope call control by NAA is sent to UICC	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched
	7- It is checked that the TAG_EVENT_LIST is the TLV selected	O. The contents of the count	The terminal Response of DISPLAY TEXT is sent to the UICC
	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	

ld	Description	API/CAT RE Expectation	APDU Expectation
6	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_CALL_CONNECTED		
	1- A event download call connected envelope is sent to UICC	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		4- 91 XX
	5- Envelope call control by NAA is sent to UICC	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched
	7- It is checked that the TAG_EVENT_LIST is the TLV selected		The terminal Response of DISPLAY TEXT is sent to the UICC
	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 buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
7	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_CALL_DISCONNECTED		
	1- A event download call disconnected envelope is sent to UICC	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		4- 91 XX
	5- Envelope call control by NAA is sent to UICC	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched The terminal Response of DISPLAY TEXT is sent to
	7- It is checked that the TAG_EVENT_LIST is the TLV selected		the UICC
	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 buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
8	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_LOCATION_STATUS	·	
	1- A event download location status envelope is sent to UICC	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 NAA is sent to UICC	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched
	7- It is checked that the TAG_LOCATION_STATUS is the TLV selected	8- The contents of the envelope	The terminal Response of DISPLAY TEXT is sent to the UICC
	8- The contents of EnvelopeHandler are compared with bufferl using Util.arrayCompare()	handler shall be the same as stored in buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
9	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_USER_ACTIVITY		
	1- A event download user activity envelope is sent to UICC	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 NAA is sent to UICC	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched
	7-It is checked that the TAG_DEVICE_IDENTITIES is the TLV selected		The terminal Response of DISPLAY TEXT is sent to the UICC
	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 buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
10	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_IDLE_SCREEN_AVAILAB LE		
	1- A event download idle screen available envelope is sent to UICC	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 NAA is sent to UICC	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched
	7- It is checked that the TAG_DEVICE_IDENTITIES is the TLV selected		The terminal Response of DISPLAY TEXT is sent to the UICC
	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 buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_CARD_READER_STATUS		74 DO EXPONENTIA
	1- A event download card reader status envelope is sent to UICC	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		4- 91 XX
	5- Envelope call control by NAA is sent to UICC	5- Applet is triggered	4-31 //
	EnvelopeHandler.getTheHandler() method is called		
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
			Proactive command Display Text is fetched
	7- It is checked that the TAG_CARD_READER_STATUS is the TLV selected		The terminal Response of DISPLAY TEXT is sent to the UICC
	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 buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
12	Envelope Handler integrity checks with UNRECOGNIZED_ENVELOPE	·	
	1- A unrecognized envelope is sent to UICC	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		4- 91 XX
	5- Envelope call control by NAA is sent to UICC	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called The EnvelopeHandler.getValueLength() is called	6- No exception is thrown and the	
	6- It is checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	handler contains the envelope call control by NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		Proactive command Display Text is fetched
			The terminal Response of DISPLAY TEXT is sent to
	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 buffer1	the UICC

i	Description	API/CAT RE Expectation	APDU Expectation
3	Envelope Handler integrity checks with EVENT_EVENT_DOWNLOAD_LANGUAGE_SEL ECTION	, , , , , , , , , , , , , , , , , , , ,	, , , , , ,
	1- A event download language selection envelope is sent to UICC	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		4-91 XX
	5- Envelope call control by NAA is sent to UICC	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched
	7- It is checked that the TAG_EVENT_LIST is the TLV selected		The terminal Response of DISPLAY TEXT is sent to the UICC
	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 buffer1	a 5.55

ld	Description	API/CAT RE Expectation	APDU Expectation
14	Envelope Handler integrity checks with EVENT_EVENT_DOWNLOAD_BROWSER_TERM INATION	-	
	1- A event download browser termination envelope is sent to UICC	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		4-91 XX
	5- Envelope call control by NAA is sent to UICC	5- Applet is triggered	4-91 XX
	EnvelopeHandler.getTheHandler() method is called		
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched
	7- It is checked that the TAG_EVENT_LIST is the TLV selected		The terminal Response of DISPLAY TEXT is sent to the UICC
	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 buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
15	Envelope Handler integrity checks with EVENT_EVENT_DOWNLOAD_DATA_AVAILABL E		
	1- The applet builds a proactive command OPEN CHANNEL. proactiveHandler.send() method is called	1- The applet is registered to EVENT_EVENT_DOWNLOAD_DA TA_AVAILABLE and EVENT_EVENT_DOWNLOAD_CH ANNEL_STATUS	1- OPEN CHANNEL proactive command is fetched TERMINAL RESPONSE is issued with Channel Id = 01
	2- A event download data available envelope is sent to UICC	2- Applet is triggered	locada with Gharmonia – 01
	3- EnvelopeHandler.getTheHandler() method is called	3-No exception is thrown.	
	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_CHANNEL_STATUS		
	5- A proactive command DISPLAY TEXT is sent		
	6- Envelope call control by NAA is sent to UICC		5-91 XX
	EnvelopeHandler.getTheHandler() method is called	6- Applet is triggered	
	7- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched
	8- It is checked that the TAG_CHANNEL_STATUS is the TLV selected		The terminal Response of DISPLAY TEXT is sent to the UICC
	9- The contents of EnvelopeHandler are compared with buffer1 using Util.arrayCompare()	9- The contents of the envelope handler shall be the same as stored in buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
16	Envelope Handler integrity checks with EVENT_EVENT_DOWNLOAD_CHANNEL_STAT US		
	1- A event download channel status envelope is sent to UICC	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_CHANNEL_STATUS		
	4- A proactive command DISPLAY TEXT is sent		4-91 XX
	5- Envelope call control by NAA is sent to UICC	5- Applet is triggered	4-91 //
	EnvelopeHandler.getTheHandler() method is called		
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched
	7- It is checked that the TAG_CHANNEL_STATUS is the TLV selected		The terminal Response of DISPLAY TEXT is sent to the UICC
	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 buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
17	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_ CHANGE		
	1- A event download access technology change envelope is sent to UICC	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_ACCESS_TECHNOLOGY		
	4- A proactive command DISPLAY TEXT is sent		4- 91 XX
	5- Envelope call control by NAA is sent to UICC	5- Applet is triggered	4- 91 AX
	EnvelopeHandler.getTheHandler() method is called		
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched
	7- It is checked that the TAG_ACCESS_TECHNOLOGY is the TLV selected		The terminal Response of DISPLAY TEXT is sent to the UICC
	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 buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
18	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_DISPLAY_PARAMETER_C HANGED		
	1- A event download display parameter changed envelope is sent to UICC	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_DISPLAY_PARAMETER		
	4- A proactive command DISPLAY TEXT is sent		4- 91 XX
	5- Envelope call control by NAA is sent to UICC	5- Applet is triggered	4- 31 XX
	EnvelopeHandler.getTheHandler() method is called		
	6- It is 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	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES	control by NAA	
	Call Control execution is finished		
			Proactive command Display Text is fetched
	7- It is checked that the TAG_DISPLAY_PARAMETER is the TLV selected		The terminal Response of DISPLAY TEXT is sent to the UICC
	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 buffer1	
		9- Applet sends a DECLARE SERVICE (add) proactive command with its service identifier	9- DECLARE SERVICE (add) proactive command is fetched
			Successful TERMINAL RESPONSE is issued

ld	Description	API/CAT RE Expectation	APDU Expectation
19	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_LOCAL_CONNECTION		
	1- A event download local connection envelope is sent to UICC with the allocated service Id of Applet	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_SERVICE_RECORD		
	4- A proactive command DISPLAY TEXT is sent		4- 91 XX
	5- Envelope call control by NAA is sent to UICC	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called	6- No exception is thrown and the	
	6- It is checked that the contents of the envelope handler is the envelope call control using EnvelopeHandler.copy() and Util.arrayCompare() methods	handler contains the envelope call control by NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched
			The terminal Response of DISPLAY TEXT is sent to
	7- It is checked that the TAG_SERVICE_RECORD is the TLV selected		the UICC
	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 buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
20	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_NETWORK_SEARCH_MO DE_CHANGE		
	1- A event download network search mode change envelope is sent to UICC	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_NETWORK_SEARCH_MODE		
	4- A proactive command DISPLAY TEXT is sent		4- 91 XX
	5- Envelope call control by NAA is sent to UICC	5- Applet is triggered	
	EnvelopeHandler.getTheHandler() method is called		
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		Proactive command Display Text is fetched
	7-It is checked that the TAG_NETWORK_SEARCH_MODE is the TLV selected		The terminal Response of DISPLAY TEXT is sent to the UICC
	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 buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
21	Envelope Handler integrity checks with EVENT_ EVENT_DOWNLOAD_BROWSING STATUS		
	1- A event download browsing status envelope is sent to UICC	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	2 No exception is thewn.	
	EnvelopeHandler.copy()	3- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_BROWSING_STATUS		
	4- A proactive command DISPLAY TEXT is sent		
	5- Envelope call control by NAA is sent to UICC		4- 91 XX
	EnvelopeHandler.getTheHandler() method is called	5- Applet is triggered	
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES		
	Call Control execution is finished		
			Proactive command Display Text is fetched
	7- It is checked that the TAG_BROWSING_STATUS is the TLV selected		The terminal Response of DISPLAY TEXT is sent to the UICC
	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 buffer1	

ld	Description	API/CAT RE Expectation	APDU Expectation
22	Envelope Handler integrity checks with EVENT_ EXTERNAL_FILE_UPDATE under MF		
	1- $\mathrm{EF}_{\mathrm{TARU}}$ of the UICC file system is updated		
	2- EnvelopeHandler.getTheHandler() method is called	1- Applet is triggered	
	3- Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	2- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_FILE_LIST	3- No exception is thrown.	
	4- A proactive command DISPLAY TEXT is sent		
	5- Envelope call control by NAA is sent to UICC		4- 91 XX
	EnvelopeHandler.getTheHandler() method is called	5- Applet is triggered	
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES	control by NAA	
	Call Control execution is finished		
			Proactive command Display Text is fetched
	7- It is checked that the TAG_FILE_LIST is the TLV selected		The terminal Response of DISPLAY TEXT is sent to
	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 buffer1	the UICC
	9- It is checked that the EnvelopeHandler contains the comprehension TLVs: Device Identity, File List and File Update Information with the correct value. The EnvelopeHandler does not contain the comprehension TLV AID		

ld	Description	API/CAT RE Expectation	APDU Expectation
23	Envelope Handler integrity checks with EVENT_ EXTERNAL_FILE_UPDATE under ADF		
	1- ${ t EF}_{{ t LARU}}$ of the ADF file system is updated		
	2- EnvelopeHandler.getTheHandler() method is called	1- Applet is triggered	
	3- Copy the contents of the envelope handler in buffer 1 using EnvelopeHandler.copy()	2- No exception is thrown.	
	The EnvelopeHandler.findTLV() method is called with TAG_FILE_LIST	3- No exception is thrown.	
	4- A proactive command DISPLAY TEXT is sent		
	5- Envelope call control by NAA is sent to UICC		4- 91 XX
	EnvelopeHandler.getTheHandler() method is called	5- Applet is triggered	
	6- It is 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 NAA	
	The EnvelopeHandler.findTLV() method is called with TAG_DEVICE_IDENTITIES	,	
	Call Control execution is finished		
			Proactive command Display Text is fetched
	7- It is checked that the TAG_FILE_LIST is the TLV selected		The terminal Response of DISPLAY TEXT is sent to
	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 buffer1	the UICC
	9- It is checked that the EnvelopeHandler contains the comprehension TLVs: Device Identity, File List, AID and File Update Information with the correct value.		

5.5.2.4 EnvelopeResponseHandler

Test Area Reference: Cre_Hin_Erhd.

5.5.2.4.1 Conformance requirement

5.5.2.4.1.1 Normal execution

• CRRN1: At the processToolkit invocation the TLV-List is cleared.

5.5.2.4.1.2 Parameter errors

5.5.2.4.1.3 Context errors

No requirements.

5.5.2.4.2 Test area files

Test Source: Test_Cre_Hin_Erhd.java.

Test Applet: Cre_Hin_Erhd_1.java.

Cap_File: Cre_Hin_Erhd.cap.

5.5.2.4.3 Test coverage

CRR Number Test Case Number	
CRRN1	1

5.5.2.4.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	At the processToolkit invocation the TLV-List is cleared	•	
	Applet1 is registered to EVENT_UNRECOGNIZED_ENVELOPE.		
	1-An unrecognized envelope is sent to the UICC	1- Applet1 is triggered	
	2- EnvelopeResponseHandler.getTheHandler()is called by the Applet1.		
	3- EnvelopeResponseHandler.getLength() method is called by Applet1	3- The return value shall be 0	

5.5.3 Applet Triggering

5.5.3.1 General behaviour

Test Area Reference: Cre_Apt_Genb.

5.5.3.1.1 Conformance requirement

5.5.3.1.1.1 Normal execution

- CRRN1: When a first level application is the selected application and when a Toolkit Applet is triggered the *select()* method of the Toolkit Applet shall not be launched since the Toolkit Applet itself is not selected.
- CRRN2: The CAT Runtime Environment shall only trigger a Toolkit Applet if it is in the selectable state as defined in ETSI TS 102 226 [8].
- CRRN3: When the CAT Runtime Environment has to trigger several applets on the same event, the next applet is triggered on the return of the *processToolkit()* method of the previous Toolkit Applet.

5.5.3.1.1.2 Parameter errors

No requirements.

5.5.3.1.1.3 Context errors

5.5.3.1.2 Test area files

Test Source: Test_Cre_Apt_Genb.java.

Test Applet: Cre_Apt_Genb_1.java.

Cap File: cre_apt_genb.cap.

5.5.3.1.3 Test coverage

CR Number	Test Case Number
CRRN1	Covered by all other tests of this clause (5.5.3)
CRRN2	1, 2, 3, 4
CRRN3	Covered by all other tests of this clause (5.5.3)

5.5.3.1.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Triggering an applet in the installed state		
	When installed, the applet is registered to EVENT_EVENT_DOWNLOAD_USER_ACTIVITY		
	1- Install the applet without making it selectable		1- SW = 90 00 2- SW ≠ 90 00
	2- Select the Applet by AID	2- Applet is not triggered	2 377 7 00 00
	3- An envelope event download user activity is sent to the UICC		
2	Triggering an applet in the make selectable		
	state		
	1- Install the applet to make it selectable		1- SW = 90 00 2- SW = 90 00
	2- Select the Applet by AID3- An envelope event download user activity is sent to the UICC	2- Applet is triggered	
3	Triggering an applet in the lock state		
	1- Set the applet in the lock state		1- SW = 90 00 2- SW ≠ 90 00
	2- Select the Applet by AID 3- An envelope event download user activity is sent to the UICC	2- Applet is not triggered	2-300 7 30 00
4	Triggering an applet in the make selectable state		
	1- Set the applet in the make selectable state		1- SW = 90 00 2- SW = 90 00
	2- Select the Applet by AID 3- An envelope event download user activity is sent to the UICC	2- Applet is triggered	

5.5.3.2 EVENT_PROFILE_DOWNLOAD

Test Area Reference: Cre_Apt_Epdw.

5.5.3.2.1 Conformance requirement

5.5.3.2.1.1 Normal execution

- CRRN1: Upon reception of a TERMINAL PROFILE APDU command the CAT Runtime Environment shall store the terminal profile and trigger all the Toolkit Applet(s) registered to this event.
- CRRN2: The applet is not triggered by the EVENT_PROFILE_DOWNLOAD once it has deregistered from this event.
- CRRN3: The CAT Runtime Environment shall not reply busy to a Terminal Profile command.

5.5.3.2.1.2 Parameter errors

No requirements.

5.5.3.2.1.3 Context errors

No requirements.

5.5.3.2.2 Test area files

Test Source: Test_Cre_Apt_Epdw.java.

Test Applet: Cre_Apt_Epdw_1.java.

Cre_Apt_Epdw_2.java.

Cre_Apt_Epdw_3.java.

Cap_File: Cre_apt_epdw.cap.

5.5.3.2.3 Test coverage

CRR Number	Test Case Number
CRRN1	1
CRRN2	3
CRRN3	2

5.5.3.2.4 Test procedure

ld	Description	API/CAT RE 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_MENU_SELECTION.		
	1-Terminal Profile command is sent to UICC	1- Applet1 is triggered	
		Applet1 finalizes 2- Applet2 is triggered	
		Applet2 finalizes 3- Applet3 is not triggered	

ld	Description	API/CAT RE Expectation	APDU Expectation
2	The CAT Runtime Environment shall not reply busy to a Terminal Profile command		
	1-Envelope menu selection is sent to the UICC	1- Applet3 is triggered by the EVENT_MENU_SELECTION	
	Applet3 builds a REFRESH proactive command in UICC initialization mode		
	2-ProactiveHandler.send() method is called by applet3	Applet3 is suspended until the terminal response	2- A proactive command is sent
	3-Terminal Profile command is sent to the UICC	3- Applet1 is triggered by EVENT_PROFILE_DOWNLOAD	
	Applet1 calls ToolkitRegistry.clearEvent(EVENT_PROFILE_DOWNLOAD)		
		Applet1 finalizes Applet2 is triggered by EVENT_PROFILE_DOWNLOAD	
	4-Applet2 calls ToolkitRegistry.clearEvent(EVENT_PROFILE_DOWNLOAD)	Applet2 finalizes	
	6-Applet3 calls ToolkitRegistry.setEvent(EVENT_PROFILE_DOW NLOAD)		5- The terminal response of the proactive command is sent
		Applet3 finalizes	
3	Deregistered applets are not triggered		
	Terminal Profile command is sent to the UICC	Applet3 is triggered (Applet1 and Applet2 are not triggered)	

5.5.3.3 EVENT_MENU_SELECTION

Test Area Reference: Cre_Apt_Emse.

5.5.3.3.1 Conformance requirement

5.5.3.3.1.1 Normal execution

• CRRN1: Upon reception of an ENVELOPE (MENU SELECTION) APDU command, the CAT Runtime Environment shall only trigger the Toolkit Applet registered to the corresponding event with the associated menu identifier.

5.5.3.3.1.2 Parameter errors

No requirements.

5.5.3.3.1.3 Context errors

5.5.3.3.2 Test area files

 $Test\ Source: \qquad Test_Cre_Apt_Emse.java.$

Test Applet: Cre_Apt_Emse_1.java.

Cre_Apt_Emse_2.java.

Cap File: Cre_apt_emse.cap.

5.5.3.3.3 Test coverage

CRR Number	Test Case Number
CRRN1	1

5.5.3.3.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to EVENT_MENU_SELECTION and triggering		
	ToolkitRegistry.initMenuEntry() method is called at the installation 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=true IconQualifier=0 IconIdentifier=0		
	event= EVENT_MENU_SELECTION 1-ToolkitRegistry.isEventSet() is called at installation. Perform UICC initialization with the facility SET UP MENU and without the	1- The method shall return true	
	facilities SET EVENT LIST and POLL INTERVAL features		
	2-Item Identifier = 1 Event Menu Selection envelope is sent to the UICC with the item identifier of a menu entry of Applet1	2- Applet1 is triggered and Applet2 is not triggered	
		Applet1 finalizes	
	3-Item Identifier = 2 Event Menu Selection envelope is sent to the UICC with the item identifier of a menu entry of Applet2	3- Applet2 is triggered and Applet1 is not triggered	

5.5.3.4 EVENT_MENU_SELECTION_HELP_REQUEST

Test Area Reference: Cre_Apt_Emsh.

5.5.3.4.1 Conformance requirement

5.5.3.4.1.1 Normal execution

- CRRN1: If an ENVELOPE (MENU_SELECTION_HELP_SUPPORTED) command is received for one entry supporting help, then CAT Runtime Environment shall trigger the corresponding applet.
- CCRN2: A toolkit applet shall be triggered by the EVENT_MENU_SELECTION_HELP_REQUEST event only if the Menu Id corresponding to the Envelope Menu Selection Help Request received by the CAT Runtime Environment was registered with the helpSupported value set to true.
- CCRN3: If at least one menuId of a Toolkit Applet registers to
 EVENT_MENU_SELECTION_HELP_REQUEST, the SET UP MENU proactive command sent by the CAT
 Runtime Environment shall indicate to the ME that help information is available unless all the menus entries
 that support help are disabled.

5.5.3.4.1.2 Parameter errors

No requirements.

5.5.3.4.1.3 Context errors

No requirements.

5.5.3.4.2 Test area files

 $Test\ Source: \qquad Test_Cre_Apt_Emsh.java.$

Test Applet: Cre_Apt_Emsh_1.java.

Cre_Apt_Emsh_2.java.

Cre_Apt_Emsh_3.java.

Cap File: Cre_apt_emsh.cap.

5.5.3.4.3 Test coverage

CRR Number	Test Case Number
CRRN1	1
CRRN2	1
CRRN3	2

5.5.3.4.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to	į.	P
	EVENT_MENU_SELECTION_HELP_REQUEST		
	and triggering		
	Applet1 and Applet2 are installed		
	ToolkitRegistry.InitMenuEntry() method is called at the installation of Applet1 and Applet2		
	For Applet1 (item id 1): MenuEntry="Applet1A" Offset=0		
	Length=menuEntry.length HelpSupported=true		
	IconQualifier=0 IconIdentifier=0		
	For Applet1 (item id 2): MenuEntry="Applet1B" Offset=0		
	Length=menuEntry.length HelpSupported=false IconQualifier=0 IconIdentifier=0		
	event= EVENT_MENU_SELECTION_HELP_REQUEST 1- ToolkitRegistry.isEventSet() is called at the installation		
	For Applet2 (item id 3): MenuEntry="Applet2A" Offset=0	1- The command shall return true	
	Length=menuEntry.length HelpSupported=true IconQualifier=0 IconIdentifier=0		
	For Applet2 (item id 4): MenuEntry="Applet2B" Offset=0 Length=menuEntry.length HelpSupported=false		
	IconQualifier=0 IconIdentifier=0		
	<pre>event= EVENT_MENU_SELECTION_HELP_REQUEST 2- ToolkitRegistry.isEventSet() is called at installation</pre>	2- The command shall return true	
	Perform UICC initialization with the facility SET UP MENU and without the facilities SET EVENT LIST and POLL INTERVAL		
	3-Item identifier = 1 Menu Selection Help Request envelope is sent to the UICC with item identifier 1 belonging to Applet1	3- Applet1 is triggered and Applet2 is not triggered	
	4-Item identifier = 2 Menu Selection Help Request envelope is sent to the UICC with item identifier 2 belonging to Applet1	4 Applet1 and Applet2 are not triggered	
	5-Item identifier = 3 Menu Selection Help Request envelope is sent to the UICC with item identifier 3 belonging to Applet2	5- Applet2 is triggered and Applet1 is not triggered	
	6-Item identifier = 4 Menu Selection Help Request envelope is sent to the UICC with item identifier 4 belonging to Applet2	6- Applet2 and Applet1 are not triggered	
	1	1	

ld	Description	API/CAT RE Expectation	APDU Expectation
2	Applet deregistration to		
	EVENT_MENU_SELECTION_HELP_REQUEST		
	Applet1 and Applet2 are deleted		
	Applet3 is installed		
	ToolkitRegistry.InitMenuEntry() method is called at the installation of Applet3		
	For Applet3 (item id 5): MenuEntry="Applet3A" Offset=0 Length=menuEntry.length		
	HelpSupported=true		
	IconQualifier=0		
	IconIdentifier=0		
	For Applet3 (item id 6): MenuEntry="Applet3B" Offset=0 Length=menuEntry.length HelpSupported=true IconQualifier=0 IconIdentifier=0		
	For Applet3 (item id 7): MenuEntry="Applet3C" Offset=0 Length=menuEntry.length HelpSupported=false IconQualifier=0		
	IconIdentifier=0 1- Perform UICC initialization with the facility SET UP MENU and without the facilities SET EVENT LIST and POLL INTERVAL		1- The UICC shall issue a SET UP MENU proactive command with Menu Entry ID entry '05', '06' and '07', and Help supported set to true.
	2- Menu Selection Help Request envelope is sent to the UICC with item identifier 5 belonging to applet3	2- Applet3 is triggered by EVENT_MENU_SELECTION_HEL P_REQUEST	
	3- ToolkitRegistry.disableMenuEntry() method for item id 5 is called by the Menu Selection Help Request Envelope.		3- The UICC shall issue a SET UP MENU proactive command with Menu Entry ID entry '06' and '07', and Help supported set to true.
	4- Menu Selection Help Request envelope is sent to the UICC with item identifier 6 belonging to applet3	4- Applet3 is triggered by EVENT_MENU_SELECTION_HEL P_REQUEST	
	5- ToolkitRegistry.disableMenuEntry() method for item id 6 is called by the Menu Selection Help Request Envelope		5- The UICC shall issue a SET UP MENU proactive command with Menu Entry ID entry '07', and Help supported set to false

5.5.3.5 EVENT_CALL_CONTROL_BY_NAA

Test Area Reference: Cre_Apt_Eccn.

5.5.3.5.1 Conformance requirement

5.5.3.5.1.1 Normal execution

- CRRN1: The applet is triggered by the EVENT_CALL_CONTROL_BY_NAA once it has registered to this event and an Envelope Call Control by NAA is received.
- CRRN2: The applet is not triggered by the EVENT_CALL_CONTROL_BY_NAA once it has deregistered from this event.
- CRRN3: Regardless of the Toolkit Applet state the CAT Runtime Environment shall not allow more than one Toolkit Applet to be registered to this event at a time.

5.5.3.5.1.2 Parameter errors

No requirements.

5.5.3.5.1.3 Context errors

No requirements.

5.5.3.5.2 Test area files

Test Source: Test_Cre_APT_ECCN.java.

Test Applet: Cre_Apt_Eccn_1.java.

Cre_Apt_Eccn_2.java.

Cap File: Cre_apt_eccn.cap.

5.5.3.5.3 Test coverage

CRR Number	Test Case Number
CRRN1	1, 2, 3
CRRN2	3
CDDN3	See ADL 2 TKP SEV/TR

5.5.3.5.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applets registration to EVENT_CALL_CONTROL_BY_NAA and triggering		
	Applet1 is registered to EVENT_CALL_CONTROL_BY_NAA.		
	Applet2 is registered to EVENT_MENU_SELECTION		
	1- An Envelope Call control by NAA is sent to the UICC	1- Applet1 is triggered	
2	Applet deregistration and registration of the second applet to EVENT_CALL_CONTROL_BY_NAA.		
	1- An Envelope menu selection is sent to the UICC	1- Applet2 is triggered by EVENT_MENU_SELECTION.	
	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
	3- An Envelope Call control by NAA envelope is sent to the UICC	3- Applet1 is triggered	the terminal response
	ToolkitRegistry.clearEvent() is called for EVENT_CALL_CONTROL_BY_NAA		
		Applet1 finalizes.	
	4- TERMINAL RESPONSE of Display Text is sent to the UICC	4- Applet2 is resumed	
	ToolkitRegistry.setEvent() method is called for EVENT_CALL_CONTROL_BY_NAA		
		Applet2 finalizes	
3	Applet triggering		
	An Envelope Call control by NAA envelope is sent to the UICC	Applet2 is triggered. (Applet1 is not triggered)	

5.5.3.6 EVENT_TIMER_EXPIRATION

Test Area Reference: Cre_Apt_Etex.

5.5.3.6.1 Conformance requirement

5.5.3.6.1.1 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.

5.5.3.6.1.2 Parameter errors

5.5.3.6.1.3 Context errors

No requirements.

5.5.3.6.2 Test area files

Test Source: Test_Cre_Apt_Etex.java.

Test Applet: Cre_Apt_Etex_1.java.

Cap File: Cre_apt_etex.cap.

5.5.3.6.3 Test coverage

CRR Number	Test Case Number
CRRN1	1, 2
CRRN2	2

5.5.3.6.4 Test procedure

ld	Description	API/CAT RE 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_MENU_SELECTION.		
	<pre>event= EVENT_TIMER_EXPIRATION 1- ToolkitRegistry.isEventSet() method is called.</pre>	1- The method returns true	
	2- An Envelope TIMER_EXPIRATION is sent to the UICC.	2- Applet is triggered.	
2	Applet deregistration		
	Timer id=1 ToolkitRegistry.ReleaseTimer() method is called		
	1- An Envelope timer expiration is sent to the UICC	1- Applet is not triggered	
	An Envelope Menu selection is sent to the UICC		
	ToolkitRegistry.AllocateTimer() method is called		
	2- An Envelope TIMER_EXPIRATION is sent to the UICC	O Applet in trippered	
		2- Applet is triggered	

5.5.3.7 EVENT_EVENT_DOWNLOAD_MT_CALL

Test Area Reference: Cre_Apt_Edmc.

5.5.3.7.1 Conformance requirement

5.5.3.7.1.1 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.

5.5.3.7.1.2 Parameter errors

No requirements.

5.5.3.7.1.3 Context errors

No requirements.

5.5.3.7.2 Test area files

Test Source: Test_Cre_Apt_Edmc.java.

Test Applet: Cre_Apt_Edmc_1.java.

Cap File: cre_apt_edmc.cap.

5.5.3.7.3 Test coverage

CRR Number	Test Case Number
CRRN1	1, 2
CRRN2	2

5.5.3.7.4 Test procedure

ld	Description	API/CAT RE 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_MENU_SELECTION		
	event= EVENT_EVENT_DOWNLOAD_MT_CALL 1-ToolkitRegistry.isEventSet() method is called	1- The method returns true	
	2-An Envelope EVENT_DOWNLOAD_MT_CALL is sent to the UICC	2- Applet is triggered	
2	Applet deregistration		
	<pre>event= EVENT_EVENT_DOWNLOAD_MT_CALL ToolkitRegistry.clearEvent()method is called</pre>		
	1-An Envelope EVENT_DOWNLOAD_MT_CALL is sent to the UICC		
	An Envelope menu selestion is sent to the UICC	1- Applet is not triggered	
	<pre>event= EVENT_EVENT_DOWNLOAD_MT_CALL ToolkitRegistry.setEvent() method is called</pre>		
	2-An Envelope EVENT_DOWNLOAD_MT_CALL is sent to the UICC	2- Applet is triggered	

5.5.3.8 EVENT_EVENT_DOWNLOAD_CALL_CONNECTED

Test Area Reference: Cre_Apt_Edcc.

5.5.3.8.1 Conformance requirement

5.5.3.8.1.1 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.

5.5.3.8.1.2 Parameter errors

No requirements.

5.5.3.8.1.3 Context errors

No requirements.

5.5.3.8.2 Test area files

Test Source: Test_Cre_Apt_Edcc.java.

Test Applet: Cre_Apt_Edcc_1.java.

Cap File: Cre_apt_edcc.cap.

5.5.3.8.3 Test coverage

CRR Number	Test Case Number
CRRN1	1, 2
CRRN2	2

5.5.3.8.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
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_MENU_SELECTION		
	<pre>event= EVENT_EVENT_DOWNLOAD_CALL_CONNECTED 1-ToolkitRegistry.isEventSet() method is called</pre>		
	2-An Envelope EVENT_DOWNLOAD_CALL_CONNECTED is sent to the UICC	1- Method returns true	
		2- Applet is triggered	
2	Applet deregistration		
	event=EVENT_EVENT_DOWNLOAD_CALL_CONNECTED ToolkitRegistry.clearEvent()method is called		
	1-A call connected event dowload is sent to the UICC		
	An Envelope menu selection is sent to the UICC	1- Applet is not triggered	
	<pre>Event= EVENT_EVENT_DOWNLOAD_CALL_CONNECTED ToolkitRegistry.setEvent() method is called</pre>		
	2-An Envelope EVENT_DOWNLOAD_CALL_CONNECTED is sent to the UICC	2- Applet is triggered	

5.5.3.9 EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED

Test Area Reference: Cre_Apt_Edcd.

5.5.3.9.1 Conformance requirement

5.5.3.9.1.1 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.

5.5.3.9.1.2 Parameter errors

No requirements.

5.5.3.9.1.3 Context errors

No requirements.

5.5.3.9.2 Test area files

Test Source: Test_Cre_Apt_Edcd.java.

Test Applet: Cre_Apt_Edcd_1.java.

Cap File: Cre_apt_edcd.cap.

5.5.3.9.3 Test coverage

CRR Number	Test Case Number	
CRRN1	1, 2	
CRRN2	2	

5.5.3.9.4 Test procedure

ld	Description	API/CAT RE 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_MENU_SELECTION		
	Event=EVENT_EVENT_DOWNLOAD_CALL_DISCONNECT ED		
	1-ToolkitRegistry.isEventSet() method is called	1- Method returns true	
	2-An Envelope EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED is sent to the UICC	2- Applet is triggered	
2	Applet deregistration		
	Event= EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED ToolkitRegistry.clearEvent()method is called		
	1-An Envelope EVENT_DOWNLOAD_CALL_DISCONNECTED is sent to the UICC		
	An envelope menu selection is sent to the UICC	1- Applet is not triggered	
	Event= EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED ToolkitRegistry.setEvent() method is called		
	2-An Envelope EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED is sent to the UICC	2- Applet is triggered	

5.5.3.10 EVENT_EVENT_DOWNLOAD_LOCATION_STATUS

Test Area Reference: Cre_Apt_Edls.

5.5.3.10.1 Conformance requirement

5.5.3.10.1.1 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.

5.5.3.10.1.2 Parameter errors

No requirements.

5.5.3.10.1.3 Context errors

No requirements.

5.5.3.10.2 Test area files

Test Source: Test_Cre_Apt_Edls.java.

Test Applet: Cre_Apt_Edls_1.java.

Cap File: Cre_apt_edls.cap.

5.5.3.10.3 Test coverage

CRR Number	Test Case Number
CRRN1	1, 2
CRRN2	2

5.5.3.10.4 Test procedure

ld	Description	API/CAT RE 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_MENU_SELECTION		
	<pre>Event=EVENT_EVENT_DOWNLOAD_LOCATION_STATUS 1-ToolkitRegistry.isEventSet() method is called</pre>	1- Method returns true	
	2-An Envelope EVENT_EVENT_DOWNLOAD_LOCATION_STATUS is sent to the UICC	2- Applet is triggered	

ld	Description	API/CAT RE Expectation	APDU Expectation
2	Applet deregistration		
	Event=EVENT_EVENT_DOWNLOAD_LOCATION_STATUS ToolkitRegistry.clearEvent()method is called		
	1-An Envelope EVENT_DOWNLOAD_LOCATION_STATUS is sent to the UICC	1- Applet is not triggered	
	An Envelope menu selection is sent to the UICC	T- Applet is not triggered	
	<pre>Event= EVENT_EVENT_DOWNLOAD_LOCATION_STATUS ToolkitRegistry.setEvent() method is called</pre>		
	2-An Envelope EVENT_DOWNLOAD_LOCATION_STATUS is sent to the UICC	2- Applet is triggered	

5.5.3.11 EVENT_EVENT_DOWNLOAD_USER_ACTIVITY

Test Area Reference: Cre_Apt_Edua

5.5.3.11.1 Conformance requirement

5.5.3.11.1.1 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.

5.5.3.11.1.2 Parameter errors

No requirements.

5.5.3.11.1.3 Context errors

No requirements.

5.5.3.11.2 Test area files

Test Source: Test_Cre_Apt_Edua.java.

Test Applet: Cre_Apt_Edua_1.java.

Cap File: Cre_apt_edua.cap.

5.5.3.11.3 Test coverage

CRR Number	Test Case Number	
CRRN1	1, 2	
CRRN2	2	

5.5.3.11.4 Test procedure

ld	Description	API/CAT RE 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_MENU_SELECTION	-	·
	Event= EVENT_EVENT_DOWNLOAD_USER_ACTIVITY 1-ToolkitRegistry.isEventSet() method is called 2-An Envelope EVENT_DOWNLOAD_USER_ACTIVITY is sent to the UICC	1- Method returns true2- Applet is triggered	
2	Applet deregistration Event= EVENT_EVENT_DOWNLOAD_USER_ACTIVITY ToolkitRegistry.clearEvent()method is called 1-An Envelope EVENT_DOWNLOAD_USER_ACTIVITY is sent to the UICC An Envelope menu selection is sent to the UICC Event= EVENT_EVENT_DOWNLOAD_USER_ACTIVITY ToolkitRegistry.setEvent() method is called	1- Applet is not triggered	
	2-An Envelope EVENT_DOWNLOAD_USER_ACTIVITY is sent to the UICC	2- Applet is triggered	

5.5.3.12 EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE

Test Area Reference: Cre_Apt_Edis.

5.5.3.12.1 Conformance requirement

5.5.3.12.1.1 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.

5.5.3.12.1.2 Parameter errors

No requirements.

5.5.3.12.1.3 Context errors

No requirements.

5.5.3.12.2 Test area files

Test Source: Test_Cre_Apt_Edis.java.

Test Applet: Cre_Apt_Edis_1.java.

Cap File: Cre_apt_edis.cap.

5.5.3.12.3 Test coverage

CRR Number	RR Number Test Case Number	
CRRN1	1, 2	
CRRN2	2	

5.5.3.12.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_ AVAILABLE and triggering		
	Applet is registered to the EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE and to EVENT_MENU_SELECTION Event= EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE 1-ToolkitRegistry.isEventSet() method is called		
	2- An Envelope EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE is sent to the UICC	2- Applet is triggered	
2	Applet deregistration		
	Event=EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE		
	ToolkitRegistry.clearEvent()method is called		
	1- An Envelope EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE is sent to the UICC	1- Applet is not triggered	
	An Envelope menu selection is sent to the UICC		
	<pre>Event= EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE</pre>		
	ToolkitRegistry.setEvent() method is called		
	2-An Envelope EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE is sent to the UICC	2- Applet is triggered	

5.5.3.13 EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS

 $Test\ Area\ Reference:\ Cre_Apt_Edcr.$

5.5.3.13.1 Conformance requirement

5.5.3.13.1.1 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.

5.5.3.13.1.2 Parameter errors

No requirements.

5.5.3.13.1.3 Context errors

No requirements.

5.5.3.13.2 Test area files

Test Source: Test_Cre_Apt_Edcr.java.

Test Applet: Cre_Apt_Edcr_1.java.

Cap File: Cre_apt_edcr.cap.

5.5.3.13.3 Test coverage

CRR Number	Test Case Number	
CRRN1	1, 2	
CRRN2	2	

5.5.3.13.4 Test procedure

Id	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to		
	EVENT_EVENT_DOWNLOAD_CARD_READER		
	_STATUS and triggering		
	_		
	Applet is registered to the		
	EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS		
	and to EVENT_MENU_SELECTION		
	E		
	Event=EVENT_EVENT_DOWNLOAD_CARD_READER_STA		
	1-ToolkitRegistry.isEventSet() method is		
	called.	1- Method returns true	
		i wether retains true	
	2- An Envelope		
	EVENT_DOWNLOAD_CARD_READER_STATUS is sent	2- Applet is triggered	
	to the UICC	2 Applet is triggered	
2	Applet deregistration		
	P		
	Event=		
	EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS		
	ToolkitRegistry.clearEvent()method is		
	called		
	1-An Envelope	1- Applet is not triggered	
	EVENT_DOWNLOAD_CARD_READER_STATUS is sent		
	to the UICC		
	An Envelope menu selection is sent to the		
	UICC		
	Event=		
	EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS		
	ToolkitRegistry.setEvent() method is		
	called		
	2-An Envelope	2- Applet is triggered	
	EVENT DOWNLOAD CARD READER STATUS is sent		
	to the UICC		
	1	l .	

5.5.3.14 EVENT_UNRECOGNIZED_ENVELOPE

Test Area Reference: Cre_Apt_Euev.

5.5.3.14.1 Conformance requirement

5.5.3.14.1.1 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.

5.5.3.14.1.2 Parameter errors

No requirements.

5.5.3.14.1.3 Context errors

No requirements.

5.5.3.14.2 Test area files

Test Source: Test_Cre_Apt_Euen.java.

Test Applet: Cre_Apt_Euen_1.java.

Cap File: Cre_apt_euen.cap.

5.5.3.14.3 Test coverage

CRR Number	Test Case Number
CRRN1	1, 2
CRRN2	2

5.5.3.14.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to EVENT_UNRECOGNIZED_ENVELOPE and triggering		
	Applet is registered to the EVENT_UNRECOGNIZED_ENVELOPE Event= EVENT_UNRECOGNIZED_ENVELOPE 1-ToolkitRegistry.isEventSet() method is called	1- Method returns true	
	2-An Envelope UNRECOGNIZED_ENVELOPE is sent to the UICC	2- Applet is triggered	

ld	Description	API/CAT RE Expectation	APDU Expectation
2	Applet deregistration		
	Event= EVENT_UNRECOGNIZED_ENVELOPE ToolkitRegistry.clearEvent()method is called		
	1-An Envelope UNRECOGNIZED_ENVELOPE is sent to the UICC	1- Applet is not triggered	
	An Envelope menu selection is sent to the UICC		
	Event= EVENT_UNRECOGNIZED_ENVELOPE ToolkitRegistry.setEvent() method is called		
	2-An Envelope UNRECOGNIZED_ENVELOPE is sent to the UICC	2- Applet is triggered	

5.5.3.15 EVENT_STATUS_COMMAND

Test Area Reference: Cre_Apt_Estc.

5.5.3.15.1 Conformance requirement

5.5.3.15.1.1 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.

5.5.3.15.1.2 Parameter errors

No requirements.

5.5.3.15.1.3 Context errors

No requirements.

5.5.3.15.2 Test area files

Test Source: Test_Cre_Apt_Estc.java.

Test Applet: Cre_Apt_Estc_1.java.

 $Cre_Apt_Estc_2.java.$

 $Cre_Apt_Estc_3.java.$

Cap File: Cre_apt_estc.cap.

5.5.3.15.3 Test coverage

CR Number	Test Case Number	
CRRN1	1, 2, 3	
CRRN2	3	

5.5.3.15.4 Test procedure

ld	Description	API/CAT RE 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		
	RequestPolificerval() Command		
	Applet3 is registered to		
	EVENT_MENU_SELECTION.		
	1-A status command is sent to UICC	1- Applet1 is triggered.	
		Applet1 finalizes	
		2- Applet2 is triggered.	
		Applet2 finalizes	
		Appletz Illializes	
		3- Applet3 is not triggered	
2	Applet deregistration and registration of the third applet to EVENT_STATUS_COMMAND.		
	till applet to EVERT_STATOS_COMMAND.		
	1- An Envelope menu selection is sent to UICC	1- Applet3 is triggered.	
	Applet3 builds a Display Text.		
	2- ProactiveHandler.send() is called		
			2- A proactive command
		3- Applet1 is triggered.	Display Text is sent and applet is suspended until
	3- A status command is sent to UICC	To Applet 13 triggered.	the terminal response
	4- requestPollInterval() method with	4- Applet1 is deregistered to	·
	POLL_NO_DURATION is called	EVENT_STATUS_COMMAND	
		Applet1 finalizes	
		Applet2 is triggered.	
	5- requestPollInterval() method with		
	POLL_NO_DURATION is called	5- Applet2 is deregistered to EVENT_STATUS_COMMAND	
		EVENT_STATUS_COMMAND	
		Applet2 finalizes	
	6- TERMINAL RESPONSE of Display Text is sent to the UICC		
	Sent to the orce	6- Applet3 is resumed	
	7- requestPollInterval() method is called		
		7- Applet3 is registered to	
		EVENT_STATUS_COMMAND	
		Applet3 finalizes	
3	Applet3 triggering	Appleto III alizoo	
1			
	Status command is sent to UICC	Applet3 is triggered.	
		(Applet1 and Applet2 are not triggered)	
		(mggerea)	

5.5.3.16 EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION

Test Area Reference: Cre_Apt_Edlg.

5.5.3.16.1 Conformance requirement

5.5.3.16.1.1 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.

5.5.3.16.1.2 Parameter errors

No requirements.

5.5.3.16.1.3 Context errors

No requirements.

5.5.3.16.2 Test area files

Test Source: Test_Cre_Apt_Edlg.java.

Test Applet: Cre_Apt_Edlg_1.java.

Cap File: Cre_apt_edlg.cap.

5.5.3.16.3 Test coverage

CR Number	Test Case Number
CRRN1	1, 2
CRRN2	2

5.5.3.16.4 Test procedure

ld	Description	API/CAT RE 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_MENU_SELECTION.		
	Event= EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION		
	1-ToolkitRegistry.isEventSet() method is called	1-Method returns true	
	2-An Envelope EVENT_DOWNLOAD_LANGUAGE_SELECTION is sent to the UICC	2- Applet is triggered	

ld	Description	API/CAT RE Expectation	APDU Expectation
2	Applet deregistration		
	Event= EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION ToolkitRegistry.clearEvent()method is called 1-An Envelope EVENT_DOWNLOAD_LANGUAGE_SELECTION is sent	1- Applet is not triggered	
	to the UICC An Envelope menu selection is sent to the UICC		
	Event= EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION ToolkitRegistry.setEvent() method is called		
	2-An Envelope EVENT_DOWNLOAD_LANGUAGE_SELECTION is sent to the UICC	2- Applet is triggered	

5.5.3.17 EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION

Test Area Reference: Cre_Apt_Edbt.

5.5.3.17.1 Conformance requirement

5.5.3.17.1.1 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.

5.5.3.17.1.2 Parameter errors

No requirements.

5.5.3.17.1.3 Context errors

No requirements.

5.5.3.17.2 Test area files

Test Source: Test_Cre_Apt_Edbt.java.

Test Applet: Cre_Apt_Edbt_1.java.

Cap File: Cre_apt_edbt.cap.

5.5.3.17.3 Test coverage

CR Number	Test Case Number	
CRRN1	1, 2	
CRRN2	2	

5.5.3.17.4 Test procedure

ld	Description	API/CAT RE 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_MENU_SELECTION		
	Event= EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION		
	1-ToolkitRegistry.isEventSet() method is called	1-Method returns true	
	2-An Envelope EVENT_DOWNLOAD_BROWSER_TERMINATION is sent to the UICC	2- Applet is triggered	
2	Applet deregistration		
	Event= EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION ToolkitRegistry.clearEvent()method is called		
	1-An Envelope EVENT_DOWNLOAD_BROWSER_TERMINATION is sent to the UICC	1- Applet is not triggered	
	An Envelope menu selection is sent to the UICC		
	Event= EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION ToolkitRegistry.setEvent() method is called		
	2-An Envelope EVENT_DOWNLOAD_BROWSER_TERMINATION is sent to the UICC	2- Applet is triggered	

5.5.3.18 EVENT_FIRST_COMMAND_AFTER_ATR

Test Area Reference: Cre_Apt_Efca.

5.5.3.18.1 Conformance requirement

5.5.3.18.1.1 Normal execution

- CRRN1: The applet is triggered by the EVENT_FIRST_COMMAND_AFTER_ATR once it has registered to this event and upon the reception of the first APDU after the ATR, before the Status Word of the processed command has been sent back by the UICC.
- CRRN2: The applet is not triggered by the EVENT_FIRST_COMMAND_AFTER_ATR once it has deregistered from this event.
- CRRN3: If the first APDU received is a toolkit applet triggering APDU (e.g. TERMINAL PROFILE), the toolkit applets registered to the EVENT_FIRST_COMMAND_AFTER_ATR event shall be triggered first.

5.5.3.18.1.2 Parameter errors

No requirements.

5.5.3.18.1.3 Context errors

No requirements.

5.5.3.18.2 Test area files

Test Source: Test_Cre_Apt_Efca.java.

Test Applet: Cre_Apt_Efca_1.java.

 $Cre_Apt_Efca_2.java.$

Cre_Apt_Efca_3.java.

Cre_Apt_Efca_4.java.

Cre_Apt_Efca_5.java.

Cap File: Cre_apt_efca.cap.

5.5.3.18.3 Test coverage

CR Number	Test Case Number	
CRRN1	1, 2, 3, 4	
CRRN2	3	
CRRN3	1, 4	

5.5.3.18.4 Test procedure

	Description	API/CAT RE Expectation	APDU Expectation
	Applets registration to EVENT_FIRST_COMMAND_AFTER_ATR and triggering		
	Applet1 is registered to the EVENT_FIRST_COMMAND_AFTER_ATR		
	Applet2 is registered to the EVENT_PROFILE_DOWNLOAD		
	Applet3 is registered to EVENT_MENU_SELECTION		
	1- Terminal Profile command is sent to the UICC	1- Applet1 is triggered by EVENT_FIRST_COMMAND_AFTE	
	2- Applet1 deregisters from EVENT_FIRST_COMMAND_AFTER_ATR	R_ATR	
	3- Applet2 deregisters from EVENT_PROFILE_DOWNLOAD	Applet1 finalizes Applet2 is triggered by EVENT_PROFILE_DOWNLOAD Applet2 finalizes Applet3 is not triggered	
- 1	4- An Envelope menu selection is sent to the UICC	4- Applet3 is triggered.	
	5- Applet3 calls setEvent() on event EVENT FIRST COMMAND AFTER ATR		

ld	Description	API/CAT RE Expectation	APDU Expectation
2	Deregistered applets are not triggered		
	1-Reset then Terminal Profile command is sent to the UICC	1-Applet3 is triggered Applet1 and Applet2 are not triggered	
	2-Applet3 calls setEvent() on EVENT_PROFILE_DOWNLOAD	2-Applet3 finalizes	
3	Install a 4 th applet registered to EVENT_FIRST_COMMAND_AFTER_ATR and EVENT_PROFILE_DOWNLOAD		
	Applet4 is installed, with the same priority level as Applet3		
	1-Reset then Terminal Profile command is sent to the UICC	1- Applet4 is triggered by EVENT_FIRST_COMMAND_AFTE R_ATR	
		Applet4 finalizes	
		Applet3 is triggered by EVENT_FIRST_COMMAND_AFTE R_ATR	
		Applet3 finalizes	
		Applet4 is triggered by EVENT_PROFILE DOWNLOAD	
		Applet4 finalizes	
		Applet3 is triggered by EVENT_PROFILE_DOWNLOAD	
	2- Delete all applets	Applet3 finalizes	
4	Check that the applet is triggered before the first status word is sent		
	1- Install Applet5 Applet5 is registered with two entries in the menu entries list Applet5 is also registered to EVENT_FIRST_COMMAND_AFTER_ATR		
	2- Reset then Terminal Profile command is sent to the UICC	2- Applet5 is triggered	
	3- Applet5 disables a menu entry		3-The SETUP MENU proactive command is fetched. There is only one item for Applet5

5.5.3.19 EVENT_EVENT_DOWNLOAD_DATA_AVAILABLE

Test Area Reference: Cre_Apt_Edda.

5.5.3.19.1 Conformance requirement

5.5.3.19.1.1 Normal execution

- CRRN1: For EVENT_EVENT_DOWNLOAD_DATA_AVAILABLE, the framework shall only trigger the applet registered to this event with the appropriate channel identifier.
- CRRN2: The registration to the EVENT_EVENT_DOWNLOAD_DATA_AVAILABLE is effective once the toolkit applet has issued a successful OPEN CHANNEL proactive command, and valid till the first successful CLOSE CHANNEL or the end of card session.
- CRRN3: When a Toolkit Applet has sent an OPEN CHANNEL proactive command and received a successful TERMINAL RESPONSE with General Result ="0x0X", the framework shall register the received channel identifier for the calling Toolkit Applet.
- CRRN4: When a Toolkit Applet has sent a CLOSE CHANNEL proactive command and received a successful TERMINAL RESPONSE with General Result ="0x0X", the framework shall release the channel identifier contained in the command.

5.5.3.19.1.2 Parameter errors

No requirements.

5.5.3.19.1.3 Context errors

No requirements.

5.5.3.19.2 Test area files

Test Applet: Test_Cre_Apt_Edda.java.

Test Applet: Cre_Apt_Edda_1.java.

Cap File: Cre_apt_edda.cap.

5.5.3.19.3 Test coverage

CR Number	Test Case Number
CRRN1	2
CRRN2	1, 4, 5
CRRN3	1
CRRN4	3

5.5.3.19.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to EVENT_EVENT_DOWNLOAD_DATA_AVAILAB LE		
	Applet1 is registered to Event Menu selection. 1- An Envelope menu selection is sent to the UICC	1- Applet1 is triggered by the envelope menu selection	
	2- Applet calls setEvent() with the event EVENT_EVENT_DOWNLOAD_DATA_AVAILABLE	2- Applet1 finalizes	
	3- An envelope Event Download Data Available is sent to the UICC Channel Status = 81 00	3- Applet1 is not triggered	
	4- An Envelope menu selection is sent to the UICC	4- Applet1 is triggered by the envelope menu selection	
	5- Applet1 builds a proactive command OPEN CHANNEL calling ProactiveHandler.init() method		
	6- send() method is called to register to this event		6- OPEN CHANNEL proactive command is fetched Unsuccessful TERMINAL RESPONSE of OPEN CHANNEL is sent to the UICC with General Result = 0x10
		7- Applet1 finalizes	
	8- An envelope Event Download Data Available is sent to the UICC with Channel Status = 01 00	8- Applet1 is not triggered	
	9- An Envelope menu selection is sent to the UICC	9- Applet1 is triggered by the envelope menu selection	
	10- Applet1 builds a proactive command OPEN CHANNEL calling ProactiveHandler.init() method		
	11- send() method is called to register to this event		11- OPEN CHANNEL proactive command is fetched. Successful TERMINAL RESPONSE of OPEN CHANNEL is sent to the UICC with Channel Id = 01 with General Result = 0x00
		12- Applet1 finalizes	
2	Applet triggering to EVENT_EVENT_DOWNLOAD_DATA_AVAILAB LE		
	1- An envelope Event Download Data Available is sent to the UICC Channel Status = 81 00	1- Applet1 is triggered	
		l	

ld	Description	API/CAT RE Expectation	APDU Expectation
3	Applet deregistration to EVENT_EVENT_	,	
	DOWNLOAD_DATA_ AVAILABLE		
	1- An Envelope menu selection is sent to	1 Applet1 is triggered	
	the UICC	1- Applet1 is triggered	
	2- Applet1 initializes and sends an OPEN		2- OPEN CHANNEL
	CHANNEL proactive command		proactive command is
			fetched
			Successful terminal response is sent, with
			channelId=02 with General
			Result = 0x01
	3- Applet1 builds a CLOSE CHANNEL		3- CLOSE CHANNEL
	Proactive Command calling ProactiveHandler.initCloseChannel() and		proactive command is
	ProactiveHandler.send() methods		fetched
			Unsuccessful TERMINAL
			RESPONSE of CLOSE CHANNEL is sent to the
	A De consilera Brent Brent Brent		UICC with General Result =
	4- An envelope Event Download Data Available is sent to the UICC	4- Applet1 is triggered	0X20
	Channel Status = 82 00		
	5- Applet1 builds a CLOSE CHANNEL		5- CLOSE CHANNEL
	Proactive Command calling		proactive command is
	ProactiveHandler.initCloseChannel() and ProactiveHandler.send() methods.		fetched
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Successful TERMINAL RESPONSE of CLOSE
			CHANNEL is sent to the
			UICC with Channel Id = 02
			with General Result = 0X02
		6- Applet1 finalize	
4	Applet triggering to		
	EVENT_EVENT_DOWNLOAD_DATA_AVAILAB		
	LE LE		
	1- An envelope Event Download Data	1- Applet1 is not triggered	
	Available is sent to the UICC Channel Status = 82 00		
5	Applet1 not triggered after a reset		
	1- Applet1 is triggered by an envelope		
	menu selection		
	2- Applet1 builds a proactive command OPEN		
	CHANNEL calling ProactiveHandler.init()		
	method		
	3- send() method is called to register to		3- OPEN CHANNEL
	this event		proactive command is fetched
			Successful TERMINAL
			RESPONSE of OPEN
			CHANNEL is sent to the
	4- isEventSet() method is called	4- returns true	UICC with Channel Id = 02 with General Result = 0X00
	5- Reset the card		
	6- An envelope Event Download Data	6- Applet1 is not triggered	
	Available is sent to the UICC Channel Status = 82 00	To Applet 1 is not triggered	

5.5.3.20 EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS

Test Area Reference: Cre_Apt_Edcs.

5.5.3.20.1 Conformance requirement

5.5.3.20.1.1 Normal execution

- CRRN1: For EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS, the framework shall only trigger the applet registered to this event with the appropriate channel identifier.
- CRRN2: The registration to the EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS is effective once the toolkit applet has issued a successful OPEN CHANNEL proactive command, and valid till the first successful CLOSE CHANNEL or the end of the card session.
- CRRN3: When a Toolkit Applet has sent an OPEN CHANNEL proactive command and received a successful TERMINAL RESPONSE, the framework shall register the received channel identifier for the calling Toolkit Applet.
- CRRN4: When a Toolkit Applet has sent a CLOSE CHANNEL proactive command and received a successful TERMINAL RESPONSE, the framework shall release the channel identifier contained in the command. A successful TERMINAL RESPONSE means that the result of the proactive command execution belongs to command performed category (i.e. General Result ='0x').

5.5.3.20.1.2 Parameter errors

No requirements.

5.5.3.20.1.3 Context errors

No requirements.

5.5.3.20.2 Test area files

Test Source: Test_Cre_Apt_Edcs.java.

Test Applet: Cre_Apt_Edcs_1.java.

Cap File: Cre_apt_edcs.cap.

5.5.3.20.3 Test coverage

CR Number	Test Case Number
CRRN1	2
CRRN2	1, 4, 5
CRRN3	1
CRRN4	3

5.5.3.20.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to EVENT_EVENT_DOWNLOAD_CHANNEL_STAT US		
	Applet1 is registered to Event Menu Selection		
	1- An Envelope menu selection is sent to the UICC	Applet1 is triggered by the envelope menu selection	
	2-The applet calls setEvent() with EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS	Applet1 finalizes	
	3- An envelope Event Download Channel Status is sent to the UICC Channel Status = 81 00	3- Applet1 is not triggered	
	4- An Envelope menu selection is sent to the UICC	4- Applet1 is triggered by the	
	5- Applet1 builds a proactive command OPEN CHANNEL calling ProactiveHandler.init() method	envelope menu selection	
	6- send() method is called to register to this event		6- OPEN CHANNEL proactive command is fetched Unsuccessful TERMINAL RESPONSE of OPEN CHANNEL is sent to the UICC with General Result = 0x10
		7- Applet finalizes	
	8- An envelope Event Download Data Available is sent to the UICC with Channel Status = 01 00	8- Applet1 is not triggered	
	9- An Envelope menu selection is sent to the UICC	9- Applet1 is triggered by the envelope menu selection	
	10- Applet1 builds a proactive command OPEN CHANNEL calling ProactiveHandler.init() method		44 ODEN CHANNEL
	11- send() method is called to register to this event a second time		11- OPEN CHANNEL proactive command is fetched Successful TERMINAL RESPONSE of OPEN CHANNEL is sent to the UICC with Channel Id = 01
		12- Applet1 finalizes	with General Result = 0x00
2	Applet triggering to EVENT_EVENT_DOWNLOAD_CHANNEL STATUS		
	1- An envelope Event Download Channel Status is sent to the UICC Channel Status = 81 00	1- Applet1 is triggered	

ld	Description	API/CAT RE Expectation	APDU Expectation
3	Applet deregistration to EVENT_EVENT_	,	P
	DOWNLOAD_CHANNEL STATUS		
	1- An Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2-Applet1 initializes and sends an OPEN CHANNEL proactive command		2- OPEN CHANNEL proactive command is fetched Successful terminal response is sent, with channel Id=02 with General Result = 0x01
	3- Applet1 builds a CLOSE CHANNEL Proactive Command calling ProactiveHandler.initCloseChannel() and ProactiveHandler.send() methods		3-CLOSE CHANNEL proactive command is fetched Unsuccessful TERMINAL RESPONSE of CLOSE CHANNEL is sent to the
	4-An envelope Event Download Channel Status is sent to the UICC Channel Status = 82 00	4- The applet is triggered	UICC with General Result = 0X20
	5- Applet1 builds a Close Channel Proactive Command calling ProactiveHandler.initCloseChannel() and ProactiveHandler.send() methods		5- CLOSE CHANNEL proactive command is fetched Successful TERMINAL RESPONSE of CLOSE CHANNEL is sent to the UICC with Channel Id = 02 with General Result = 0X02
		6- Applet1 finalizes	with General Result = 0x02
4	Applet triggering to EVENT_EVENT_DOWNLOAD_CHANNEL STATUS		
	1- An envelope Event Download Channel Status is sent to the UICC Channel Status = 82 00	1- Applet1 is not triggered	
5	Applet1 not triggered after a reset		
	1- Applet1 is triggered by an envelope menu selection		
	2- Applet1 builds a proactive command OPEN CHANNEL calling ProactiveHandler.init() method		
	3- send() method is called to register to this event		3- OPEN CHANNEL proactive command is fetched Successful TERMINAL RESPONSE of OPEN CHANNEL is sent to the UICC with Channel Id = 02
	4- isEventSet() method is called	4- returns true	with General Result = 0X00
	5- Reset the card		
	6- An envelope Event Download Channel Status is sent to the UICC Channel Status = 82 00	6- Applet1 is not triggered	

5.5.3.21 EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHANGE

Test Area Reference: Cre_Apt_Edat.

5.5.3.21.1 Conformance requirement

5.5.3.21.1.1 Normal execution

• CRRN1: The applet is triggered by the EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHANGE once it has registered to this event and an Envelope Event DownLoad Access Technology Change is received.

 CRRN2: The applet is not triggered by the EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHANGE once it has deregistered from this event.

5.5.3.21.1.2 Parameter errors

No requirements.

5.5.3.21.1.3 Context errors

No requirements.

5.5.3.21.2 Test area files

Test Source: Test_Cre_Apt_Edat.java.

Test Applet: Cre_Apt_Edat_1.java.

Cap File: Cre_apt_edat.cap.

5.5.3.21.3 Test coverage

CR Number	Test Case Number
CRRN1	1, 2
CRRN2	2

5.5.3.21.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to EVENT_EVENT_DOWNLOAD ACCESS_TECHNOLOGY_CHANGE and triggering		
	Applet is registered to the EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHANGE and to EVENT_MENU_SELECTION		
	Event= EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHA NGE		
	1- ToolkitRegistry.isEventSet() method is called	1- Method returns true	
	2- An Envelope EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHA NGE is sent to the UICC	2- Applet is triggered	

ld	Description	API/CAT RE Expectation	APDU Expectation
2	Applet deregistration		
	Event= EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHA NGE ToolkitRegistry.clearEvent()method is called		
	1- An Envelope EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHA NGE is sent to the UICC	1- Applet is not triggered	
	2- An Envelope menu selection is sent to the UICC	2- Applet is triggered	
	Event= EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHA NGE ToolkitRegistry.setEvent() method is called		
	3- An Envelope EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHA NGE is sent to the UICC	3- Applet is triggered	

5.5.3.22 EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CHANGED

Test Area Reference: Cre_Apt_Eddp.

5.5.3.22.1 Conformance requirement

5.5.3.22.1.1 Normal execution

- CRRN1: The applet is triggered by the EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CHANGED once it has registered to this event and an Envelope Event DownLoad Display Parameters Changed is received.
- CRRN2: The applet is not triggered by the EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CHANGED once it has deregistered from this event.

5.5.3.22.1.2 Parameter errors

No requirements.

5.5.3.22.1.3 Context errors

No requirements.

5.5.3.22.2 Test area files

Test Source: Test_Cre_Apt_Eddp.java.

Test Applet: Cre_Apt_Eddp_1.java.

Cap File: Cre_apt_eddp.cap.

5.5.3.22.3 Test coverage

CR Number	Test Case Number	
CRRN1	1, 2	
CRRN2	2	

5.5.3.22.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to EVENT_EVENT_DOWNLOAD DISPLAY_PARAMETERS_CHANGED and triggering		
	Applet is registered to the EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CH ANGED and to EVENT_MENU_SELECTION		
	Event= EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CH ANGED		
	<pre>1- ToolkitRegistry.isEventSet() method is called</pre>	1- Method returns true	
	2- An Envelope EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CH ANGED is sent to the UICC	2- Applet is triggered	
2	Applet deregistration		
	Event= EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CH ANGED ToolkitRegistry.clearEvent()method is called		
	1- An Envelope EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CH ANGED is sent to the UICC	1- Applet is not triggered	
	2- An Envelope menu selection is sent to the UICC	2- Applet is triggered	
	Event= EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CH ANGED ToolkitRegistry.setEvent() method is called		
	3- An Envelope EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETERS_CH ANGED is sent to the UICC	3- Applet is triggered	

5.5.3.23 EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION

Test Area Reference: Cre_Apt_Edlc.

5.5.3.23.1 Conformance requirement

5.5.3.23.1.1 Normal execution

- CRRN1: For EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION, the framework shall only trigger the applet registered to this event with the associated service identifier.
- CRRN2: The registration to the EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION is effective once the toolkit applet has issued a successful DECLARE SERVICE (add) proactive command, and valid till the first successful DECLARE SERVICE (delete) with the corresponding service identifier or the end of the card session.

5.5.3.23.1.2 Parameter errors

No requirements.

5.5.3.23.1.3 Context errors

No requirements.

5.5.3.23.2 Test area files

 $Test\ Source: \qquad Test_Cre_Apt_Edlc.java.$

Test Applet: Cre_Apt_Edlc_1.java.

Cap File: Cre_apt_edlc.cap.

5.5.3.23.3 Test coverage

CR Number	Test Case Number	
CRRN1	1, 2	
CRRN2	3, 4, 5	

5.5.3.23.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to EVENT_EVENT_DOWNLOAD LOCAL_CONNECTION	·	·
	Applet is registered to the EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION using the allocateServiceIdentifier() method and to EVENT_MENU_SELECTION using the initMenuEntry() method.		
	1- An envelope menu selection is sent to the UICC	1- Applet is triggered	
	Event= EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION		
	2- ToolkitRegistry.isEventSet() method is called		
		2- Method returns true	
	3- An Envelope EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION is sent to the UICC with the service identifier of Applet	3- Applet is not triggered	
	4- An envelope menu selection is sent to the UICC	4- Applet is triggered by the envelope menu selection	
	5- Applet builds and sends a DECLARE SERVICE (add) proactive command with its service ID to register to this event.	5- Applet finalizes	5- DECLARE SERVICE (add) proactive command is fetched Unsuccessful TERMINAL RESPONSE is sent to the UICC with General Result = 0x20
	6- An Envelope EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION is sent to the UICC with the service identifier of Applet	6- Applet is not triggered	
	7- An envelope menu selection is sent to the UICC	7- Applet is triggered by the envelope menu selection	
	8- Applet builds and sends a DECLARE SERVICE (add) proactive command with its service ID to register to this event.	9- Applet finalizes	8- DECLARE SERVICE proactive command is fetched Successful TERMINAL RESPONSE is sent to the UICC with General Result = 0x00
2	Applet triggering to EVENT_EVENT_DOWNLOAD LOCAL_CONNECTION		
	1- An envelope Event Download local connection is sent to the UICC with the service identifier of the Applet	1- Applet is triggered	

ld	Description	API/CAT RE Expectation	APDU Expectation
3	Applet deregistration to EVENT_EVENT_DOWNLOAD LOCAL_CONNECTION with proactive command		
	1- An Envelope menu selection is sent to the UICC	1- Applet1 is triggered	
	2- Applet initializes and sends a DECLARE SERVICE (delete) proactive command with the service identifier of Applet		2- DECLARE SERVICE (delete) proactive command is fetched Unsuccessful TERMINAL RESPONSE is sent to the UICC with General Result = 0X20
		Applet finalizes	
	3- An envelope Event Download local connection is sent to the UICC with the service identifier of the Applet	3- Applet is triggered	
	4-Applet initializes and sends a DECLARE SERVICE (delete) proactive command with the service identifier of Applet		4- DECLARE SERVICE (delete) proactive command is fetched Successful TERMINAL RESPONSE is sent to the UICC with General Result =
	Applet telepople of t	5- Applet finalizes	0X00
4	Applet triggering to EVENT_EVENT_DOWNLOAD LOCAL_CONNECTION		
	1- An envelope Event Download local connection is sent to the UICC with the service identifier of the Applet	1- Applet is not triggered	
5	Applet1 not triggered after a reset		
	1- Applet1 is triggered by an envelope menu selection		
	2- Applet builds and sends a DECLARE SERVICE (add) proactive command with its service ID to register to this event		2- DECLARE SERVICE (add) proactive command is fetched Successful TERMINAL RESPONSE is sent to the UICC with General Result =
	3- An envelope Event Download local connection is sent to the UICC with the service identifier of the Applet	3- Applet is triggered	0x00
	4- Reset the card		
	5- An envelope Event Download local connection is sent to the UICC with the service identifier of the Applet	5- Applet is not triggered	

5.5.3.24 EVENT_APPLICATION_DESELECT

Test Area Reference: Cre_Apt_Eade.

5.5.3.24.1 Conformance requirement

5.5.3.24.1.1 Normal execution

- CRRN1: The applet is triggered by the EVENT_APPLICATION_DESELECT once it has registered to this event and once an application session is terminated (as described in ETSI TS 102 221 [5]).
- CRRN2: The applet is not triggered by the EVENT_APPLICATION_DESELECT once it has deregistered from this event.
- CRRN3: The AID of the deselected application is available to the Toolkit Applet in the *EnvelopeHandler*, as an AID Comprehension TLV data object as defined in the ETSI TS 102 223 [6].

5.5.3.24.1.2 Parameter errors

No requirements.

5.5.3.24.1.3 Context errors

No requirements.

5.5.3.24.2 Test area files

Test Source: Test_Cre_Apt_Eade.java.

Test Applet: Cre_Apt_Eade_1.java.

Cap File: Cre_apt_eade.cap.

5.5.3.24.3 Test coverage

CR Number	Test Case Number
CRRN1	1, 2
CRRN2	2
CRRN3	1. 2

5.5.3.24.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to EVENT_APPLICATION_DESELECT and triggering		·
	Applet is registered to the EVENT_APPLICATION_DESELECT and to EVENT_MENU_SELECTION		
	Event= EVENT_APPLICATION_DESELECT		
	1- ToolkitRegistry.isEventSet() method is called	1- Method returns true	
	2- Select for activation ADF1	2- Applet is not triggered	
	3- Select for activation ADF2	3- Applet is triggered The envelope handler contains the AID of ADF1	
	4- Select for termination ADF2	4- Applet is triggered The envelope handler contains the AID of ADF2	
2	Applet deregistration		
	Event= EVENT_APPLICATION_DESELECT ToolkitRegistry.clearEvent() method is called		
	Perform UICC initialization		
	1- Select for activation ADF1		
	2- Select for activation ADF2	2- Applet is not triggered	
	3- Select for termination ADF2	3- Applet is not triggered	
	4- An Envelope menu selection is sent to the UICC Event= EVENT_APPLICATION_DESELECT ToolkitRegistry.setEvent() method is called	4- Applet is triggered	
	Perform UICC initialization		
	5- Select for activation ADF1	5- Applet is not triggered	
	6- Select for activation ADF2	6- Applet is triggered The envelope handler contains the AID of ADF1	
	7- Select for termination ADF2	7- Applet is triggered The envelope handler contains the AID of ADF2	

5.5.3.25 EVENT_PROACTIVE_HANDLER_AVAILABLE

Test Area Reference: Cre_Apt_Epha.

5.5.3.25.1 Conformance requirement

5.5.3.25.1.1 Normal execution

- CRRN1: The applet is triggered by the EVENT_PROACTIVE_HANDLER_AVAILABLE once it has registered to this event and once the *ProactiveHandler* is available and all the Toolkit Applets registered to the previous event have been triggered and have returned from the *processToolkit()* invocation.
- CRRN2: The applet is not triggered by the EVENT_PROACTIVE_HANDLER_AVAILABLE once it has deregistered from this event.
- CRRN3: When the Toolkit Applet is triggered it is automatically deregistered by the CAT Runtime Environment.
- CRRN4: If a CAT session ends prior to an Applet triggering, the Applet will be triggered at the next CAT session.

5.5.3.25.1.2 Parameter errors

No requirements.

5.5.3.25.1.3 Context errors

No requirements.

5.5.3.25.2 Test area files

Test Source: Test_Cre_Apt_Epha.java.

Test Applet: Cre_Apt_Epha_1.java.

Cre_Apt_Epha_2.java.

Cap File: Cre_apt_epha.cap.

5.5.3.25.3 Test coverage

CR Number	Test Case Number
CRRN1	1
CRRN2	1
CRRN3	1
CRRN4	2

5.5.3.25.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to		
	EVENT_PROACTIVE_HANDLER_AVAILABLE, triggering and automatic deregistration		
	triggering and automatic deregistration		
	Applet1 is registered to		
	EVENT_MENU_SELECTION Applet2 is registered to		
	EVENT_MENU_SELECTION and		
	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY		
	1- Applet1 is triggered by an envelope	1- Applet1 is triggered	
	<pre>menu selection 1.1- ToolkitRegistry.setEvent() method is</pre>	1.1. No expension is thrown	
	called with Event =	1.1- No exception is thrown	
	EVENT_PROACTIVE_HANDLER_AVAILABLE		
	<pre>1.2- ToolkitRegistry.setEvent() method is called with Event =</pre>	1.2- No exception is thrown	
	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY		
	<pre>1.3- ToolkitRegistry.isEventSet() method is called with Event =</pre>	1.2 Method returns TDLIF	
	EVENT PROACTIVE HANDLER AVAILABLE	1.3- Method returns TRUE	
		1.4-	
		2- Applet1 is triggered by	
		EVENT_PROACTIVE_HANDLER_	
	Erront EVENIT DDOACTIVE HANDIED AVAILADE	AVAILABLE	2- SW = 9000 is returned to the envelope
	<pre>Event= EVENT_PROACTIVE_HANDLER_AVAILABLE 3- ToolkitRegistry.isEventSet() method is</pre>	3- Method returns FALSE	line envelope
	called by Applet1		
	4- An envelope event download user		
	activity is sent to the UICC	4- Applet1 is triggered by the	
	Event= EVENT PROACTIVE HANDLER AVAILABLE	envelope	
	5- ToolkitRegistry.setEvent() method is	5- No exception is thrown	
	called by Applet1		
	6- ToolkitRegistry.isEventSet() method is	6- Method returns TRUE	
	called by Applet1	Applet1 finalizes	
		Applet2 is triggered by the	
	Event=	envelope	
	EVENT_PROACTIVE_HANDLER_AVAILABLE	7 No succession is the succession	
	7- ToolkitRegistry.setEvent() method is called by Applet2	7- No exception is thrown	
	<pre>8- ToolkitRegistry.isEventSet() method is called by Applet2</pre>	8- Method returns TRUE	
		Applet2 finalizes	
		Applet2 finalizes Applet1 is triggered by	
		EVENT_PROACTIVE_HANDLER_	
	Event=	AVAILABLE	
	EVENT_PROACTIVE_HANDLER_AVAILABLE 9- ToolkitRegistry.isEventSet() method is		
	called by Applet1	0 Mothod roturns EALSE	
		9- Method returns FALSE Applet1 finalizes	
		Applet2 is triggered by	
		EVENT_PROACTIVE_HANDLER_	
	Event=	AVAILABLE	
	EVENT_PROACTIVE_HANDLER_AVAILABLE		
	10- ToolkitRegistry.isEventSet() method is	10- Method returns FALSE	
	called by Applet1	Applet2 finalizes	

ld	Description	API/CAT RE Expectation	APDU Expectation
2	Applet triggering between 2 CAT sessions		
	1- Applet1 is triggered by an envelope menu selection	1- Applet1 is triggered	
	1.1- Applet1 prepares and sends a Display Text proactive command	1.1 Applet1 is suspended	
	2- Fetch the proactive command		
	3- Applet2 is triggered by an envelope menu selection	3- Applet2 is triggered	
	3.1 Applet2 registers to EVENT_PROACTIVE_HANDLER_AVAILABLE then finalizes	3.1- No exception is thrown	
	4- Reset the card and send the profile download command	4- Applet2 is triggered by event EVENT_PROACTIVE_HANDLER_AVAILABLE	

5.5.3.26 EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_CHANGE

Test Area Reference: Cre_Apt_Edns.

5.5.3.26.1 Conformance requirement

5.5.3.26.1.1 Normal execution

- CRRN1: The applet is triggered by the EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_CHANGE once it has registered to this event and an Envelope Event Event Download Network Search Mode Change is received.
- CRRN2: The applet is not triggered by the EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_CHANGE once it has deregistered from this event.

5.5.3.26.1.2 Parameter errors

No requirements.

5.5.3.26.1.3 Context errors

No requirements.

5.5.3.26.2 Test area files

Test Source: Test_Cre_Apt_Edns.java.

Test Applet: Cre_Apt_Edns_1.java.

Cap File: Cre_apt_edns.cap.

5.5.3.26.3 Test coverage

CRR Number	Test Case Number	
CRRN1	1, 2	
CRRN2	2	

5.5.3.26.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to EVENT_EVENT_DOWNLOAD_NETWORK_SEA RCH_MODE_CHANGE and triggering		
	Applet is registered to the EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_C HANGE and to EVENT_MENU_SELECTION		
	event= EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_C HANGE		
	1-ToolkitRegistry.isEventSet() method is called	1- Method returns true	
	2-An Envelope EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_C HANGE is sent to the UICC	2- Applet is triggered	
2	Applet deregistration		
	event= EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_C HANGE ToolkitRegistry.clearEvent()method is called		
	1-A network search mode change event dowload is sent to the UICC	1- Applet is not triggered	
	2-An Envelope menu selection is sent to the UICC	2- Applet is triggered	
	Event= EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_C HANGE		
	ToolkitRegistry.setEvent() method is called		
	3-An Envelope EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_C HANGE is sent to the UICC	3- Applet is triggered	

5.5.3.27 EVENT_EVENT_DOWNLOAD_BROWSING_STATUS

Test Area Reference: Cre_Apt_Edbs.

5.5.3.27.1 Conformance requirement

5.5.3.27.1.1 Normal execution

- CRRN1: The applet is triggered by the EVENT_EVENT_DOWNLOAD_BROWSING_STATUS once it has registered to this event and an Envelope Event Event Download Browsing Status is received.
- CRRN2: The applet is not triggered by the EVENT_EVENT_DOWNLOAD_BROWSING_STATUS once it has deregistered from this event.

5.5.3.27.1.2 Parameter errors

No requirements.

5.5.3.27.1.3 Context errors

No requirements.

5.5.3.27.2 Test area files

Test Source: Test_Cre_Apt_Edbs.java.

Test Applet: Cre_Apt_Edbs_1.java.

Cap File: Cre_apt_edbs.cap.

5.5.3.27.3 Test coverage

CRR Number	Test Case Number	
CRRN1	1, 2	
CRRN2	2	

5.5.3.27.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to EVENT_EVENT_DOWNLOAD_BROWSING_STA TUS and triggering Applet is registered to the EVENT_EVENT_DOWNLOAD_BROWSING_STATUS and to EVENT_MENU_SELECTION		
	event= EVENT_EVENT_DOWNLOAD_BROWSING_STATUS 1-ToolkitRegistry.isEventSet() method is called	1- Method returns true	
	2-An Envelope EVENT_EVENT_DOWNLOAD_BROWSING_STATUS is sent to the UICC	2- Applet is triggered	
2	Applet deregistration		
	event= EVENT_EVENT_DOWNLOAD_BROWSING_STATUS ToolkitRegistry.clearEvent()method is called		
	1-A browsing status event dowload is sent to the UICC	1 – Applet is not triggered	
	An Envelope menu selection is sent to the UICC		
	Event= EVENT_EVENT_DOWNLOAD_BROWSING_STATUS ToolkitRegistry.setEvent() method is called		
	2-An Envelope EVENT_EVENT_DOWNLOAD_BROWSING_STATUS is sent to the UICC	2- Applet is triggered	

5.5.3.28 EVENT_EXTERNAL_FILE_UPDATE

Test Area Reference: Cre_Apt_Eefu

5.5.3.28.1 Conformance requirement

5.5.3.28.1.1 Normal execution

- CRRN1: The applet is triggered by the EVENT_EXTERNAL_FILE_UPDATE once it has registered to this event and a successful execution of an UPDATE BINARY or UPDATE RECORD or INCREASE APDU command (sent by the Terminal and received by the UICC on the I/O line) as defined in TS 102 221 [5] is performed on the associated updated file.
- CRRN2: An applet shall only be triggered once per command.
- CRRN3: The registration to this event is effective once the applet has successfully called a method registerFileEvent(...).
- CRRN4: The applet is not triggered by the EVENT_EXTERNAL_FILE_UPDATE once it has deregistered from this event.
- CRRN5: The deregistration for a particular file to this event is effective once the Applet has successfully called the method deregisterFileEvent(...).
- CRRN6: A call to the method *clearEvent*(EVENT_EXTERNAL_FILE_UPDATE) clears the event EVENT_EXTERNAL_FILE_UPDATE from the ToolkitRegistry of the Applet i.e. the Applet is no longer triggered when a file is updated.

5.5.3.28.1.2 Parameter errors

No requirements.

5.5.3.28.1.3 Context errors

• CRRC1: The applet shall not be triggered if the UPDATE BINARY or UPDATE RECORD or INCREASE APDU command are not sent by the Terminal and received by the UICC on the I/O line.

5.5.3.28.2 Test area files

Test Source: Test_Cre_Apt_Eefu.java.

Test Applet: Cre_Apt_Eefu_1.java.

Cap File: Cre_apt_eefu.cap.

5.5.3.28.3 Test coverage

CRR Number	Test Case Number	
CRRN1	1, 2	
CRRN2	1, 2	
CRRN3	1, 2	
CRRN4	2	
CRRN5	2	
CRRN6	3	
CRRC1	See ETSI TS 131 213 [12]	

5.5.3.28.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet registration to EVENT_EXTERNAL_FILE_UPDATE and triggering		
	Applet is registered to the EVENT_MENU_SELECTION		
	1- Send an envelope menu selection	1- Applet is triggered	
	<pre>Event=EVENT_EXTERNAL_FILE_UPDATE 2-ToolkitRegistry.isEventSet() method is called</pre>	2- Method returns false	
	3- ToolkitRegistry.registerFileEvent() method with fileview is called to register to EF _{TARU}	3- No exception is thrown	
	4- ToolkitRegistry.isEventSet() method is called	4- Method returns true	
	5- ToolkitRegistry.registerFileEvent() method with paths of EFLARU and EFCARU is called	5- No exception is thrown	
		Applet finalizes	
	6- Update EF _{TARU} 7- Update EF _{LARU} 8- Increase EF _{CARU}	6- Applet is triggered 7- Applet is triggered 8- Applet is triggered	
2	Applet deregistration – case 1		
	1-Update EF _{TARU}	1- Applet is triggered	
	2- ToolkitRegistry.deregisterFileEvent() method with fileview is called to deregister EF _{CARU}	2- No exception is thrown	
	<pre>Event=EVENT_EXTERNAL_FILE_UPDATE 3- ToolkitRegistry.isEventSet() method is called</pre>	3- Method returns true	
	4- Increase EF _{CARU}	4- Applet is not triggered	
	5- Update EF _{TARU}	5- Applet is triggered	
	6- ToolkitRegistry.deregisterFileEvent() method with path of EF _{LARU} is called	6- No exception is thrown	
	7- ToolkitRegistry.isEventSet() method is called	7- Method returns true	
	8- Update EF _{LARU}	8- Applet is not triggered	
	9- Update EF _{TARU}	9- Applet is triggered	
	10- ToolkitRegistry.deregisterFileEvent() method with path of EF _{TARU} is called	10- No exception is thrown	
	11- ToolkitRegistry.isEventSet() method is called	11- Method returns false	
	12- Update EF _{TARU}	12- Applet is not triggered	

ld	Description	API/CAT RE Expectation	APDU Expectation
3	Applet deregistration – case 2		
	1- Send an envelope menu selection	1- Applet is triggered	
	2- ToolkitRegistry.registerFileEvent() method with fileview is called to register	2- No exception is thrown	
	to EF _{TARU}	3- No exception is thrown	
	3- ToolkitRegistry.registerFileEvent() method with paths EF _{LARU} and EF _{CARU} is called	·	
	4- Update EF _{TARU} 5- Update EF _{LARU} 6- Increase EF _{CARU}	4- Applet is triggered5- Applet is triggered6- Applet is triggered	
	<pre>Event=EVENT_EXTERNAL_FILE_UPDATE 7- ToolkitRegistry.clearEvent() method is called</pre>	7- No exception is thrown	
	8- ToolkitRegistry.isEventSet() method is called	8- Method returns false	
	9- Update EF _{TARU} 10- Update EF _{LARU} 11- Increase EF _{CARU}	9- Applet is not triggered 10- Applet is not triggered 11- Applet is not triggered	
	12- Restore EF_{CARU} , EF_{TARU} and EF_{LARU}		

5.5.4 Proactive Command Sending by the CAT Runtime Environment

5.5.4.1 System Proactive Commands

Test Area Reference: Cre_Pcs_Spco.

5.5.4.1.1 Conformance requirement

5.5.4.1.1.1 Normal execution

- CRRN1: During a CAT session the CAT Runtime Environment shall send a SET UP MENU system proactive command whenever a menu entry is modified, added or removed.
- CRRN2: The CAT Runtime Environment shall use the data of the EFsume file when issuing the SET UP MENU proactive command.
- CRRN3: During a CAT session the CAT Runtime Environment shall send a SET UP MENU system proactive command whenever the EF_{SUME} file under the DF_{TELECOM} file is updated as defined in TS 102 222 [7].
- CRRN4: At the beginning of a CAT session, the CAT Runtime Environment shall send a SET UP MENU
 system proactive command, if at least one menu entry is registered and enabled by a selectable Toolkit Applet.
- CRRN5: At the beginning of a CAT session, the CAT Runtime Environment shall send a SET UP EVENT LIST system proactive command, if at least one event is registered by a selectable Toolkit Applet.
- CRRN6: During a CAT session the CAT Runtime Environment shall send a SET UP EVENT LIST system proactive command whenever the registered event list is changed.
- CRRN7: At the beginning of a CAT session, the CAT Runtime Environment shall send a POLL INTERVAL system proactive command, if at least one Toolkit Applet has requested a poll interval duration.
- CRRN8: During a CAT session the CAT Runtime Environment shall send a POLL INTERVAL or POLLING OFF system proactive command whenever the system poll interval duration is changed.
- CRRN9: The CAT Runtime Environment shall send its system proactive command(s) 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.

- CRRN10: The system proactive command shall only contain information from Toolkit Applets that are in the selectable state.
- CRRN11: If help is available for at least one Menu Entry inserted in the SET UP MENU system proactive command the CAT Runtime Environment shall indicate to the terminal that help information is available.
- CRRN12: If help is not available for all Menu Entries inserted in the SET UP MENU system proactive command the CAT Runtime Environment shall not indicate to the terminal that help information is available.
- CRRN13: If a text attribute different from the default format is provided for at least one Menu Entry, the SET UP MENU system proactive command shall contain the item text attribute list Comprehension TLV. The default format as defined in ETSI TS 123 040 [10] is '00 00 03 90'.

5.5.4.1.1.2 Parameter errors

No requirements.

5.5.4.1.1.3 Context errors

No requirements.

5.5.4.1.2 Test area files

Test Source: Test_Cre_Pcs_Spco.java.

Test Applet: Cre_Pcs_Spco_1.java.

Cre_Pcs_Spco_2.java.

Cre_Pcs_Spco_3.java.

Cap File: Cre_pcs_spco.cap.

5.5.4.1.3 Test coverage

CRR number	Test case number
CRRN1	see:
	Api_2_Tkr_Cmet, CRRN1,
	Api_2_Tkr_Dmet, CRRN3,
	Api_2_Tkr_Emet, CRRN3,
	Api_2_Tkr_Imet, CRRN1
	Api_2_Tkr_Smta, CRRN3
CRRN2	1
CRRN3	1
CRRN4	2, 3, 4
CRRN5	5, 6, 7
CRRN6	8
CRRN7	9, 10, 11
CRRN8	12
CRRN9	13
CRRN10	2, 4, 6, 7, 10, 11
CRRN11	See Api_2_Tkr_Cmet, CRRN6
CRRN12	See Api_2_Tkr_Cmet, CRRN6
CRRN13	14

5.5.4.1.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Set Up Menu at the beginning of a CAT session		
	Install Applet2		
	Applet2 registers to EVENT_UNRECOGNIZED_ENVELOPE and have its access conditions set to "ALWAYS"		
	1- Perform UICC initialization with set up menu facilities supported		1- SET UP MENU with main menu "UICC TEST"
	2- Select EF_{SUME} under $\text{DF}_{\text{TELECOM}}$ with a select by path command		2- SW = 9000
	3- Update $\mathrm{EF}_{\mathrm{SUME}}$ with the text "TEST MENU" and Text Attribute "00 00 13 90" (Bold)		3- SET UP MENU with main menu "TEST MENU" and Text Attribute "00001390"
	4- An unrecognized envelope is sent to trigger Applet2	4- Applet2 selects EF _{SUME} and updates its content with the text "TEST UICC" and no Text Attribute	4- SET UP MENU with main menu "TEST UICC" and no Text Attribute
	5- An unrecognized envelope is sent to trigger Applet2	5- Applet2 selects EF _{SUME} and updates its content with the text "TEST UICC" and Text Attribute "00 00 13 90"	5- SET UP MENU with main menu "TEST UICC" and Text Attribute "00001390"
	6- The EF_{SUME} under $\text{DF}_{\text{TELECOM}}$ is updated with the text "UICC TEST" and restore the initial Text Attribute		6- SET UP MENU with main menu "UICC TEST"
2	Set Up Menu at the beginning of a CAT session		
	1- Install Applet1		1- SET UP MENU with the menu of Applet1
	Applet1 registers to EVENT_MENU_SELECTION using the initMenuEntry(), to EVENT_STATUS_COMMAND using the requestPollIntervall() and to EVENT_EVENT_DOWNLOAD_MT_CALL,		
3	EVENT_EVENT_DOWNLOAD_LOCATION_STATUS Set Up Menu with applet in LOCK state		
	out op mond with applot in 2001 state		
	1- Lock Applet1		1- SET UP MENU with no menu of Applet1
4	Set Up Menu with applet in SELECTABLE state		
	1- Make selectable Applet1	2- Applet1 is triggered	1- SET UP MENU with the menu
	2- An envelope menu selection is sent to trigger Applet1	2- Applett is triggered	
	3- Applet1 disables its menu		3- SET UP MENU with no menu
	4- An envelope event download MT call is sent to trigger Applet1	4- Applet1 is triggered	
	5- Applet1 enables its menu		5- SET UP MENU with the menu
5	Set Up Event List at the beginning of a CAT session		
	1- Perform UICC initialization with EVENT DOWNLOAD and set up event list facilities supported		1- SET UP EVENT LIST proactive command [Event list]= '19020003' or '99020003'

ld	Description	API/CAT RE Expectation	APDU Expectation
6	Setup Event List with applet in LOCK state	·	
	1- Lock Applet1		1- SET UP EVENT LIST Proactive command [CommandQualifier]= 00h
7	Setup Event List with applet in SELECTABLE state		
	1- Make selectable Applet1		1- SET UP EVENT LIST proactive command [Event list]= '19020003' or '99020003'
8	Dynamic setup event list on registry modification		
	1- An envelope menu selection is sent to trigger Applet1	1- Applet1 is triggered	
	2- Applet1 deregisters to event EVENT_EVENT_DOWNLOAD_MT_CALL		2- SET UP EVENT LIST proactive command [Event list]= '190103' or '990103'
	3- An unrecognized envelope is sent to trigger Applet2	3- Applet2 is triggered	
	4- Applet registers to event EVENT_EVENT_DOWNLOAD_LOCATION_STATUS and to EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION		4- SET UP EVENT LIST proactive command [Event list]= '19020307' or
	5- An envelope event download location status is sent to the UICC	5- Applet1 and Applet2 are triggered	99020307
	6- Applet1 and Applet2 clear their events download		6- SET UP EVENT LIST proactive command [CommandQualifier]= 00h
	7- An envelope menu selection is sent to trigger Applet1	7- Applet1 is triggered	8- SET UP EVENT LIST
	8- Applet1 registers to event EVENT_EVENT_DOWNLOAD_MT_CALL		proactive command [Event list]= '190100' or '990100'
	9- Delete Applet1		9- SET UP EVENT LIST proactive command [CommandQualifier]= 00h
	10- Install Applet1 (same registration as before, plus registration to EVENT_UNRECOGNIZED_ENVELOPE)		10- SET UP EVENT LIST proactive command [Event list]= '19020003' or '99020003'
9	Poll Interval at the beginning of a CAT session		
	1- Perform UICC initialization with polling facilities supported		1- POLL INTERVAL proactive command
10	Poll Interval with applet in LOCK state 1- Lock Applet1		1- POLLING OFF proactive
11	Poll Interval with applet in SELECTABLE state		command
	1- Make selectable Applet1		1- POLL INTERVAL proactive command

ld	Description	API/CAT RE Expectation	APDU Expectation
12	Dynamic Polling commands on registry		-
	modification		
	1- A status command is sent	1- Applet1 is triggered	
	2- Applet1 calls the method requestPollInterval() with POLL_NO_DURATION		2- POLLING OFF proactive command
	3- An unrecognized envelope is sent	3- Applet1 is triggered	
	4- Applet1 calls the method requestPollInterval() with POLL_SYSTEM_DURATION	Applet1 finalizes Applet2 is triggered	4- POLL INTERVAL proactive command
	5- Delete Applet1		5- POLLING OFF proactive command
	6- Install Applet1 (same registration as before, plus registration to EVENT_UNRECOGNIZED_ENVELOPE)		6- POLL INTERVAL proactive command
13	System Proactive Commands sending		
	1- Perform UICC initialization with system proactive commands facilities		
	2- An unrecognized envelope is sent	2- Applet1 is triggered	
	3- Applet1 deregisters to event EVENT_EVENT_DOWNLOAD_MT_CALL and UNRECOGNIZED_ENVELOPE, disables its menu entry, calls method requestPollIntervall() with POLL_NO_DURATION then builds and sends a Display Text Proactive command with text 'Text1'	Applet1 finalizes Applet2 is triggered	3- Display Text with text 'text1' proactive command
	4- Applet2 registers to event EVENT_PROACTIVE_HANDLER_AVAILABLE, disable its menu entry then builds and sends a Display Text Proactive command with text 'Text21'	Applet2 finalizes Applet2 is triggered by event EVENT_PROACTIVE_HANDLER_ AVAILABLE	4- Display Text with text 'text21' proactive command
	5- Applet2 builds and sends a Display Text Proactive command with text 'Text22'	Applet2 finalizes	5- Display Text with text 'text22' proactive command
	7- Delete Applet1		6- SET UP MENU proactive command with no menu, SET UP EVENT LIST proactive command [Event list]= '190103' or '990103' and POLLING OFF proactive command

ld	Description	API/CAT RE Expectation	APDU Expectation
14	Text Attribute management in Set Up Menu		P
	1- Install Applet3, Applet3 calls the initMenuEntry() method, then reinitialize the card.		1- SET UP MENU proactive command with one menu and no Item Text Attribute List or the default Text Attribute List '00000390"
	2- Send an Unrecognized Envelope to trigger Applet2	2- Applet2 is triggered	
	3- Applet2 enable its menu entry	Applet2 finalizes	3- SET UP MENU proactive command two menus and no Item Text Attribute List or the default Text Attribute List '0000039000000390"
	4-Send an envelope Menu Selection with the Item Id of Applet2	4- Applet2 is triggered	2.00
	5- Applet2 calls		
	setMenuEntryTextAttribute() method to set the attribute to "00 00 13 90" (Bold)	Applet2 finalizes	5- SET UP MENU proactive command two menus and the Item Text Attribute List "00001390"
	6-Send an envelope Menu Selection with the Item Id of Applet2	6- Applet2 is triggered	
	7- Applet2 calls disableMenuEntry()	Applet2 finalizes	7- SET UP MENU proactive command with one menu and no Item Text Attribute List or the default Text
	8-Send an envelope Menu Selection with the Item Id of Applet3	8- Applet3 is triggered	Attribute List '00000390"
	9- Applet3 calls setMenuEntryTextAttribute() method to set the attribute to "00 00 23 90" (Italic)	Applet3 finalizes	9- SET UP MENU proactive command one menu and the Item Text Attribute List "00002390"
	10-Send an envelope Menu Selection with the Item Id of Applet2	10- Applet2 is triggered	
	11- Applet2 calls enableMenuEntry()	Applet2 finalizes	11- SET UP MENU proactive command two menus and the Item Text Attribute List "00001390 00002390"
	12-Send an envelope Menu Selection with the Item Id of Applet2	12- Applet2 is triggered	13- SET UP MENU
	13- Applet2 calls setMenuEntryTextAttribute() method to set the attribute to "00 00 03 90" (default)	Applet2 finalizes	proactive command two menus and the Item Text Attribute List "00000390 00002390"
	14- Lock Applet3		14- SET UP MENU proactive command with one menu and no Item Text Attribute List or the default Text Attribute List '00000390"
	15- unlock Applet3		15- SET UP MENU proactive command two menus and the Item Text Attribute List "00000390 00002390"
	16- Send an envelope Menu Selection with the Item Id of Applet3	16- Applet3 is triggered	

ld	Description	API/CAT RE Expectation	APDU Expectation
	17- Applet3 calls setMenuEntryTextAttribute() method to set the attribute to "00 00 03 90" (default)	Applet3 finalizes	17- SET UP MENU proactive command two menus and no Item Text Attribute List or the default Text Attribute List '0000039000000390"

5.5.4.2 Interaction with GSM commands

Test Area Reference: Cre_Pcs_Igco

5.5.4.2.1 Conformance requirement

5.5.4.2.1.1 Normal execution

• CRRN1: The CAT Runtime Environment shall process a UICC command even when a proactive command is pending (before and after the FETCH command until the terminal response). The CAT Runtime Environment shall answer with the SW1 and SW2 described in ETSI TS 102 221 [5] and ETSI TS 102 223 [6].

5.5.4.2.1.2 Parameter errors

No requirements.

5.5.4.2.1.3 Context errors

No requirements.

5.5.4.2.2 Test area files

Test Source: Test_Cre_Pcs_Igco.java.

Test Applet: Cre_Pcs_Igco_1.java.

Cap File: Cre_pcs_igco.cap.

5.5.4.2.3 Test coverage

CRR number	Test case number
CRRN1	1 2 3

5.5.4.2.4 Test procedure

ld	Description	API/CAT RE 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		1- 91xx
	SETUP_MENU		
	a and han we		2- Expected data = XX XX
	2- SELECT MF		XX XX 3F 00
			SW = 91XX
	3- Failed SELECT File		3- 6A82
	4- FETCH		4- Proactive Command:
			SETUP MENU
			5- Expected data = XX XX
	5- SELECT MF		XX XX 3F 00
			SW = 9000
	6- TERMINAL RESPONSE		6- 9000
2	Interaction with GSM Commands after		
-	ENVELOPE (MENU SELECTION)		
	in connection with FETCH and TERMINAL		
	RESPONSE		
	1120.01102		
	Menu Entry ID = 0x01		1- Expected data = XX XX
			XX XX 3F 00
	1- SELECT MF		SW = 91XX
			2- 6A82
	2- Failed SELECT File		3- Proactive Command:
	3- FETCH		Display Text
			4- Expected data = XX XX
	4- SELECT MF		XX XX 3F 00
			SW = 9000
	S TERMINAL PROPOSES		5- 9000
	5- TERMINAL RESPONSE		0 0000

ld	Description	API/CAT RE Expectation	APDU Expectation
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		1- Expected data = XX XX XX XX 3F 00 SW = 91XX
	2- FETCH		2- Proactive Command: Display Text
	3- SELECT MF		3- Expected data = XX XX XX XX 3F 00
	4- Failed SELECT File 5- TERMINAL RESPONSE		SW = 9000 4-6A82 5-91XX
	6- SELECT MF		6- Expected data = XX XX
	7-Failed SELECT File 8-FETCH		XX XX 3F 00 SW = 91XX 7-6A82 8-Proactive Command:
	9-SELECT MF		Display Text
	10-TERMINAL RESPONSE		9- Expected data = XX XX XX XX 3F 00 SW = 9000 10- 9000

5.5.4.3 Proactive Command Control

Test Area Reference: Cre_Pcs_Pcco.

5.5.4.3.1 Conformance requirement

5.5.4.3.1.1 Normal execution

- CRRN1: The CAT Runtime Environment shall prevent the toolkit applet to issue the following proactive commands: SET UP MENU, SET UP EVENT LIST, POLL INTERVAL, POLLING OFF. If an applet attempts to issue such a command, the CAT Runtime Environment shall throw an exception.
- CRRN2: The CAT Runtime Environment shall prevent a toolkit applet to issue a TIMER MANAGEMENT
 proactive command using a timer identifier, which is not allocated to it. If an applet attempts to issue such a
 command, the CAT Runtime Environment shall throw an exception.
- CRRN3: The CAT Runtime Environment shall prevent a toolkit applet to issue a SEND DATA, RECEIVE DATA and CLOSE CHANNEL proactive commands using a channel identifier, which is not allocated to it. If an applet attempts to issue such a command the CAT Runtime Environment shall throw an exception.
- CRRN4: The CAT Runtime Environment shall prevent a toolkit applet to issue an OPEN CHANNEL proactive command if it exceeds the maximum number of channel allocated to this applet. If an applet attempts to issue such a command the CAT Runtime Environment shall throw an exception.
- CRRN5: The CAT Runtime Environment shall prevent a Toolkit Applet to issue a DECLARE SERVICE (add, delete) proactive command using a service identifier, which is not allocated to it. If an applet attempts to send such a command, the CAT Runtime Environment shall throw an exception.
- CRRN6: All proactive commands shall be sent to the terminal as constructed by the Toolkit Applet without
 any check by the CAT Runtime Environment.
- CRRN7: The CAT Runtime Environment cannot guarantee that if the SET UP IDLE MODE TEXT proactive command is used by a Toolkit Applet, another Toolkit Applet will not overwrite this text at a later stage.

5.5.4.3.1.2 Parameter errors

No requirements.

5.5.4.3.1.3 Context errors

No requirements.

5.5.4.3.2 Test area files

Test Source: Test_Cre_Pcs_Pcco.java.

Test Applet : Cre_Pcs_Pcco_1.java.

Cre_Pcs_Pcco_2.java.

Cre_Pcs_Pcco_3.java.

Cap File: Cre_pcs_pcco.cap.

5.5.4.3.3 Test coverage

CRR number	Test case number	
CRRN1	1	
CRRN2	2	
CRRN3	3,4	
CRRN4	3,4	
CRRN5	5	
CRRN6	6	
CRRN7	Not testable	

5.5.4.3.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
0	Applets installation		
	Applet1 is installed with 4 timers maximum, 0 channel maximum, 1 menu and 4 service identifiers maximum Applet2 is installed with 8 timers maximum, 3 channels maximum, 1 menu and 8 service identifiers maximum Applet3 is installed with 1 channel maximum, 1 menu and no service identifier		
1	STK Proactive Commands		
	1- Send envelope menu selection with the item id of Applet1 2- Applet1 builds and sends a SET UP MENU proactive command 3- Applet1 builds and sends a SET UP EVENT LIST proactive command 4- Applet1 builds and sends a POLL INTERVAL proactive command 5- Applet1 builds and sends a POLLING OFF proactive command	1- Applet1 is triggered 2- COMMAND_NOT_ALLOWED ToolkitException is thrown 3- COMMAND_NOT_ALLOWED ToolkitException is thrown 4- COMMAND_NOT_ALLOWED ToolkitException is thrown 5- COMMAND_NOT_ALLOWED ToolkitException is thrown	1- 90 00 (no proactive command is sent)

ld	Description	API/CAT RE Expectation	APDU Expectation
2	TIMER MANAGEMENT Proactive command		•
	1- Send envelope menu selection with the item id of Applet2	1- Applet2 is triggered	
	2- Applet2 allocates 8 timers by calling allocateTimer() method and release the 3 timers from id 1 to 3.	2- No exception is thrown	
	3- Send envelope menu selection with the item id of Applet1	3- Applet1 is triggered	
	4- Applet1 allocates 3 timers (Id 1 to 3) by calling allocateTimer() method 3 times	4- No exception is thrown	
	5- Send envelope menu selection with the item id of Applet2	5- Applet2 is triggered	
	6- Applet2 releases timers of Id 4 to 7 7- Send envelope menu selection with the item id of Applet1	6- No exception is thrown 7- Applet1 is triggered	
	8- For each of the 3 timers allocated by	8- No exception is thrown	8- 3 TIMER MANAGEMENT
	Applet1 (Id 1to 3) a TIMER MANAGEMENT proactive session is performed		proactive commands are fetched
	9- For other timers (Id 4 to 8), Applet1 builds and sends a TIMER MANAGEMENT	9- COMMAND_NOT_ALLOWED ToolkitException is thrown	9- The Status word of the last previous Terminal
	proactive command	Toolkii Excopiion lo tillowii	Response is 90 00 (no more proactive command is sent)
3	No Channel allowed		
	1 Send envelope menu selection with the item id of Applet1	1- Applet1 is triggered	1- 90 00 (no proactive command is sent)
	2- Applet1 builds and sends a CSD OPEN CHANNEL proactive command	2- COMMAND_NOT_ALLOWED	·
	3- Applet1 builds and sends a GPRS OPEN CHANNEL proactive command	ToolkitException is thrown 3- COMMAND_NOT_ALLOWED	
	4- Applet1 builds and sends a SEND DATA	ToolkitException is thrown	
	proactive command 5- Applet1 builds and sends a RECEIVE DATA	4- COMMAND_NOT_ALLOWED	
	proactive command	5- COMMAND_NOT_ALLOWED	
	6- Applet1 builds and sends a CLOSE CHANNEL proactive command	ToolkitException is thrown	
	DIMINIBE PLOUGETVE COMMUNIC	6- COMMAND_NOT_ALLOWED	
		ToolkitException is thrown	

ld	Description	API/CAT RE Expectation	APDU Expectation
4	4 Channels allowed		
	1- Send envelope menu selection with the item id of Applet3 2- Applet3 builds and sends a CSD OPEN CHANNEL proactive command	1- Applet3 is triggered2- No exception is thrown	2- 91 1C
	3- Send a Fetch and Terminal Response OK on channel 7		3- OPEN CHANNEL proactive
	4- Send envelope menu selection with the item id of Applet2 5- Applet2 builds and sends a CSD OPEN CHANNEL proactive command 6- Send a Fetch and Terminal Response OK	4- Applet2 is triggered5- No exception is thrown	5- 91 1C
	on channel 1 7- Applet2 builds and sends a GPRS OPEN CHANNEL proactive command 8- Send Fetch and Terminal Response OK on channel 2	7- No exception is thrown	6- OPEN CHANNEL proactive command is fetched 7- 91 17
	9- For each channel id from 3 to 7, Applet2 builds and sends a SEND DATA proactive command 10- For each channel id from 3 to 7, Applet2 builds and sends a RECEIVE DATA proactive command 11- For each channel id from 3 to 7, Applet2 builds and sends a CLOSE CHANNEL proactive command	9- COMMAND_NOT_ALLOWED ToolkitException is thrown 10- COMMAND_NOT_ALLOWED ToolkitException is thrown 11- COMMAND_NOT_ALLOWED ToolkitException is thrown 12- No exception is thrown	8- OPEN CHANNEL proactive command is fetched, SW = 91 1C on the Terminal Response
	12- Applet2 builds and sends a CSD OPEN CHANNEL proactive command 13- Fetch and Terminal Response OK on channel 3 14- Applet2 builds and sends an OPEN CHANNEL proactive command	14- COMMAND_NOT_ALLOWED ToolkitException is thrown	13- OPEN CHANNEL proactive command is fetched 14- 90 00 expected to the previous Terminal Response (no proactive command is sent)

ld	Description	API/CAT RE Expectation	APDU Expectation
5	DECLARE SERVICE Proactive command		
	1- Send envelope menu selection with the item id of Applet2 2- Applet2 allocates 8 services by calling allocateServiceIdentifier() method and release the 3 services from id 0 to 2 using method releaseServiceIdentifier().	1- Applet2 is triggered2- No exception is thrown	
	3- Send envelope menu selection with the item id of Applet1	3- Applet1 is triggered	
	4- Applet1 allocates 3 services (Id 0 to	4- No exception is thrown	
	<pre>2) by calling allocateServiceIdentifier() method 3 times</pre>	5- Applet2 is triggered	
	5- Send envelope menu selection with the item id of Applet2 6- Applet2 releases services of Id 5 to 7 7- Send envelope menu selection with the	6- No exception is thrown 7- Applet1 is triggered	
	item id of Applet1 8- For each of the 3 services allocated by Applet1 (Id 0 to 2) DECLARE SERVICE (add) proactive commands are sent		8- 3 DECLARE SERVICE proactive commands are fetched
	9- For other services (Id 3 to 8), Applet1 builds and sends a DECLARE SERVICE (add) proactive command	9- COMMAND_NOT_ALLOWED ToolkitException is thrown	9- The Status word of the last previous Terminal Response is 91 1C on the Terminal Response
	10- For each of the 3 services allocated by Applet1 (Id 0 to 2) DECLARE SERVICE (delete) proactive commands are sent	10- No exception is thrown	10- 3 DECLARE SERVICE proactive commands are fetched
	11- For other services (Id 3 to 8), Applet1 builds and sends a DECLARE SERVICE (delete) proactive command	11- COMMAND_NOT_ALLOWED ToolkitException is thrown	11- The Status word of the last previous Terminal Response is 90 00 (no more proactive command is sent)
6	Unknown proactive command		
	1- Send an envelope menu selection with the item id of Applet1 2- Applet1 builds an unknown proactive	1- Applet1 is triggered	2 04 09
	command		2- 91 08
	3- Fetch and terminal response OK		3- The unknown proactive command is fetched

5.5.5 Exception Handling

5.5.5.1 General Behaviour

Test Area Reference: Cre_Exh_Genb.

5.5.5.1.1 Conformance requirement

5.5.5.1.1.1 Normal execution

- CRRN1: If more than one Applet shall be triggered by the currently processed event all Exceptions shall be caught by the CAT Runtime Environment and shall not be sent to the terminal. The CAT Runtime Environment shall proceed with the triggering.
- CRRN2: If only one Applet shall be triggered by the currently processed event and an ISOException with the reason code REPLY_BUSY is thrown, it shall be sent to the terminal using the Status Word 0x9300.
- CRRN3: If only one Applet shall be triggered by the currently processed event other Exceptions than an ISOException with the reason code REPLY_BUSY shall not be propagated to the terminal.

5.5.5.1.1.2 Parameter errors

No requirements.

5.5.5.1.1.3 Context errors

No requirements.

5.5.5.1.2 Test area files

Test Source: Test_Cre_Exh_Genb.java.

Test Applet: Cre_Exh_Genb_1.java.

Cre_Exh_Genb_2.java.

Cap File: Cre_exh_genb.cap.

5.5.5.1.3 Test coverage

CRR Number	Test Case Number
CRRN1	1
CRRN2	2
CRRN3	3

5.5.5.1.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
0	Applet1 is installed and registers to		
	EVENT_MENU_SELECTION and		
	EVENT_EVENT_DOWNLOAD_MT_CALL		
	Applet2 is installed and registers to		
	EVENT EVENT DOWNLOAD MT CALL and		
	EVENT_EVENT_DOWNLOAD_MI_CALL AND EVENT EVENT DOWNLOAD USER ACTIVITY		
1	ISOException REPLY_BUSY is not sent to the		
1 '	terminal in multi triggering		
	1- Send an envelope Event Download MT Call	1- Applet1 is triggered	
	(multi triggering event, multi registered	11 33 33	
	applets)	2- Applet1 sends a ISOException	
		with the reason code	
		REPLY_BUSY then finalizes	
		Applet2 is triggered, does nothing	
		and finalizes	
		[3- SW = 90 00
		4- Applet1 is triggered, does	3 311 33 33
	4- Send an envelope Event Download MT Call	nothing and finalizes	
	<pre>(multi triggering event, multi registered applets)</pre>	linearing arra mianzoo	
	[appiecs]	Applet2 is triggered, sends a	
		ISOException with the reason code	
		REPLY_BUSY then finalizes	
		_	5- SW = 90 00

ld	Description	API/CAT RE Expectation	APDU Expectation
2	ISOException REPLY_BUSY is sent to the terminal in single triggering		
	1- Send an envelope Menu Selection to trigger Applet1 (single triggering event)	1- Applet1 is triggered, sends a ISOException with the reason code REPLY_BUSY then finalizes	1- SW = 93 00
	2- Send an envelope Event Download User Activity (multi triggering event, single registered applet)	2- Applet2 is triggered, sends a ISOException with the reason code REPLY_BUSY then finalizes	2- SW = 93 00
3	Other exception than ISOException REPLY_BUSY are not sent to the terminal		
	1- Send an envelope Menu Selection to trigger Applet1 (single triggering event)	1- Applet1 is triggered, sends a ISOException with reason code different to REPLY_BUSY then finalizes	1- SW = 90 00
	2- Send an envelope Menu Selection to trigger Applet1 (single triggering event)	2- Applet1 is triggered, sends a ToolkitException then finalizes	2- SW = 90 00

5.5.5.2 Interaction with Multiple Triggering

Test Area Reference: Cre_Exh_Imtg.

5.5.5.2.1 Conformance requirement

5.5.5.2.1.1 Normal execution

• CRRN1: An exception thrown by a toolkit applet, will not influence toolkit applets registered to the same

5.5.5.2.1.2 Parameter errors

No requirements.

5.5.5.2.1.3 Context errors

No requirements.

5.5.5.2.2 Test area files

Test Source: Test_Cre_Exh_Imtg.java.

Test Applet: Cre_Exh_Imtg_1.java.

 $Cre_Exh_Imtg_2.java.$

Cap File: Cre_exh_imtg.cap.

5.5.5.2.3 Test coverage

CRR Number	Test Case Number	
CRRN1	1, 2, 3, 4	

5.5.5.2.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
0	Load/install 2 toolkit applets registered to		
	EVENT_STATUS_COMMAND,		
	EVENT_PROFILE_DOWNLOAD,		
	EVENT_UNRECOGNIZED_ENVELOPE,		
	EVENT_EVENT_DOWNLOAD_MT_CALL		
	Applet1: Priority= 0x01,		
	Applet2: Priority= 0x02,		
	(i.e. Applet1 is triggered before Applet2)		
1	Profile_Download is sent		
		4. Appletd is tripped a	
		1- Applet1 is triggered	
		2- NullPointerException is thrown	
		3- Applet2 is triggered	
2	Status_Command is sent	1- Applet1 is triggered	
		O North Designation of the second	
		2- NullPointerException is thrown	
		3- Applet2 is triggered	
3	UNRECOGNIZED_Envelope is sent		
		1- Applet1 is triggered	
		2- NullPointerException is thrown	
		3- Applet2 is triggered	
<u> </u>	Front Download MT Collings		
4	Event_Download_MT_Call is sent		
		1- Applet1 is triggered	
		2- NullPointerException is thrown	
		3- Applet2 is triggered	

5.5.6 Envelope Response Posting

5.5.6.1 General Behaviour

Test Area Reference: Cre_Erp_Genb.

5.5.6.1.1 Conformance requirement

5.5.6.1.1.1 Normal execution

- CRRN1: A Toolkit Applet can post a response to some events with the *post()* or the *postAsBERTLV()* methods and can continue its processing after the call to these methods.
- CRRN2: The CAT Runtime Environment shall send the response before the emission of the next proactive command or when all the Toolkit Applets triggered by the event have finished their processing.
- CRRN3: The Boolean parameter passed to the *post()* or *postAsBERTLV()* method shall be mapped by the CAT Runtime Environment to the correct status word. If the value is true it corresponds to a successful ending of the command status word "9000". If the value is false it corresponds to a warning status word "6200".

5.5.6.1.1.2 Parameter errors

5.5.6.1.1.3 Context errors

No requirements.

5.5.6.1.2 Test area files

None.

5.5.6.1.3 Test coverage

CRR Number	Test Case Number
CRRN1	See Api_2_Erh_Postb: CRRN1
	See Api_2_Erh_Postbb: CRRN1
CRRN2	See Api_2_Erh_Postb: CRRN3
	See Api_2_Erh_Postbb: CRRN3
CRRN3	See Api_2_Erh_Postb: CRRN4
	See Api_2_Erh_Postbb: CRRN4

5.5.6.1.4 Test procedure

None.

5.5.6.2 EVENT_CALL_CONTROL_BY_NAA

Test Area Reference: Cre_Erp_Eccn.

5.5.6.2.1 Conformance requirement

5.5.6.2.1.1 Normal execution

• CRRN1: The CAT Runtime Environment can't reply busy when an Envelope(Call Control) is sent to the UICC.

5.5.6.2.1.2 Parameter errors

No requirements.

5.5.6.2.1.3 Context errors

No requirements.

5.5.6.2.2 Test area files

Test Source: Test_Cre_Erp_Eccn.java.

Test Applet: Cre_Erp_Eccn_1.java.

Cre_Erp_Eccn_2.java.

Cre_Erp_Eccn_3.java.

Cap File: Cre_erp_eccn.cap.

5.5.6.2.3 Test coverage

CRR Number	Test Case Number
CRRN1	1, 2

5.5.6.2.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applet1 is registered on the EVENT_CALL_CONTROL_BY_NAA, Applet2 is registered and triggered on the EVENT_MENU_SELECTION.		
	1- Applet2 invokes the method send() and no fetch is performed	1- Applet2 is suspended	
	2- Envelope(Call Control) is sent to the UICC	2- Applet1 is triggered	
	3- Applet1 calls the method EnvelopeResponseHandler.postASBERTLV() to change any incoming dialling number into +11 22 33 44 4- A Fetch command is sent to the UICC		3- The dialling number is retrieved and the status words is 91xx
	5- A Terminal Response command is sent to the UICC	5- Applet2's execution shall continue	
	6- Delete Applet1 & Applet2		
2	7- Install Applet3 Applet3 is registered on both the events EVENT_CALL_CONTROL_BY_NAA and EVENT_MENU_SELECTION		
	1- Envelope Menu Selection is sent to the UICC	1- Applet3 is triggered on the EVENT_MENU_SELECTION	
	2- Applet3 invokes the method send() and no fetch is performed	2- Applet3 is suspended on the send() method	
	3- Envelope(Call Control) is sent to the UICC	3- Applet3 is triggered on the EVENT_CALL_CONTROL_BY_NA A	
	4- Applet3 calls the method EnvelopeResponseHandler.postASBERTLV() to change any incoming dialling number into +11 22 33 44		4- The dialling number is retrieved and the status words is 91xx
	5- A Fetch command is sent to the UICC 6- A Terminal Response command is sent to the UICC	6- The Applet3's execution shall continue	

5.5.6.3 EVENT_UNRECOGNIZED_ENVELOPE

Test Area Reference: Cre_Erp_Euen.

5.5.6.3.1 Conformance requirement

5.5.6.3.1.1 Normal execution

• CRRN1: The EnvelopeResponseHandler is available for the EVENT_UNRECOGNIZED_ENVELOPE.

5.5.6.3.1.2 Parameter errors

5.5.6.3.1.3 Context errors

No requirements.

5.5.6.3.2 Test area files

Test Source: Test_Cre_Erp_Euen.java.

Test Applet: Cre_Erp_Euen_1.java.

Cap File: Cre_erp_euen.cap.

5.5.6.3.3 Test coverage

CRR Number	Test Case Number
CRRN1	1

5.5.6.3.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	An applet triggered on the		The UICC answers to the
	EVENT_UNRECOGNIZED_ENVELOPE calls the		Envelope with status words
	EnvelopeResponseHandler.post() method	The post() method returns no	9000. The data retrieved are
		exception	the ones posted by the
		-	applet.

5.5.7 Toolkit Installation

5.5.7.1 General Behaviour

Test Area Reference: Cre_Tin_Genb

5.5.7.1.1 Conformance requirement

5.5.7.1.1.1 Normal execution

- CRRN1: The UICC Toolkit Application specific parameters (Tag 80h) are mandatory for applications using the *uicc.toolkit.ToolkitInterface* defined in ETSI TS 102 241 [9].
- CRRN2: Any additional parameters of the UICC Toolkit Application specific parameters field (Tag 80h) shall be ignored by the card.
- CRRN3: Some unused byte may be added at the end of the UICC Toolkit Application specific parameters field (Tag 80h).
- CRRN4: The UICC Access Application specific parameters (Tag 81h) are applicable to applications using the *uicc.access.FileView* defined in ETSI TS 102 241 [9].
- CRRN5: The UICC Toolkit Application specific parameters field (Tag 80h) is not required for applications that do not use the *uicc.toolkit.ToolkitInterface* defined in ETSI TS 102 241 [9].
- CRRN6: The UICC Access Application specific parameters field (Tag 81h) is not required for applications that a do not use the *uicc.access.FileView* defined in ETSI TS 102 241 [9].

5.5.7.1.1.2 Parameter errors

5.5.7.1.1.3 Context errors

No requirements.

5.5.7.1.2 Test area files

Test Source: Test_Cre_Tin_Genb.java.

Test Applet: Cre_Tin_Genb_1.java (use *uicc.toolkit.ToolkitInterface*).

Cre_Tin_Genb_2.java (use uicc.access.FileView).

Cre_Tin_Genb_3.java (use uicc.toolkit.ToolkitInterface and uicc.access.FileView).

Cap File: Cre_tin_genb.cap.

5.5.7.1.3 Test coverage

	_	
CRR number	Test case number	
CRRN1	1, 2	
CRRN2	2	
CRRN3	2	
CRRN4	3	
CRRN5	3	
CRRN6	1, 2	

5.5.7.1.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Good installation with the only tag 80h		
	1- Install(install) Applet1 with only the UICC Toolkit Application specific parameters field		1- RAPDU = 00 90 00
2	Good installation with the only tag 80h		
	1- Install(install) Applet1 with only the UICC Toolkit Application specific parameters field which contains some unused bytes		1- RAPDU = 00 90 00
3	Good installation with the only tag 81h		
	1- Install(install) Applet2 with only the UICC Access Application specific parameters field		1- RAPDU = 00 90 00

5.5.7.2 Timers Allocation

Test Area Reference: Cre_Tin_Tmal.

5.5.7.2.1 Conformance requirement

5.5.7.2.1.1 Normal execution

• CRRN1: One toolkit applet can register to several timers, but a timer can only be allocated to one toolkit applet.

5.5.7.2.1.2 Parameter errors

5.5.7.2.1.3 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. If the maximum number of timers required is greater than '08' (maximum numbers of timers specified in ETSI TS 102 223 [6], the card shall return the Status Word '6A80', incorrect parameters in data field, to the Install(Install) command.

5.5.7.2.2 Test area files

Test Source: Test_Cre_Tin_Tmal.java.

Test Applet: Cre_Tin_Tmal_1.java.

Cre_Tin_Tmal_2.java.

Cre_Tin_Tmal_3.java.

Cap File: Cre_tin_tmal.cap.

5.5.7.2.3 Test coverage

CRR number	Test case number	
CRRN1	2, 3, 8	
CRRC1	1, 7	
CRRC2	4, 5, 6	

5.5.7.2.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	More than 8 timers at the instantiation of Applet1: check that Applet1 is not installed.		
	1- Install Applet1 with maximum 9 timers allocated		1- The installation failed with
	2- Applet1 is selected		the status word 6A80
			2- Applet1 is not found, RAPDU != <applet selected<br="">data> 90 00</applet>
	Reset the card		
2	Good installation of Applet2		
	1- Install Applet2 with maximum 4 timers allocated		
3	Allocate 4 timers Applet2		
	1- An envelope menu selection is send to trigger Applet2		
	2- Applet2 allocates 4 timers	2- No exception shall be thrown	
4	Allocate one more timer Applet2		
	1- Applet2 allocates one more timer	1- Shall throw a ToolkitException with reason NO_TIMER_AVAILABLE	
5	Good installation of applet3		
	1- Install Applet3 with maximum 8 timers allocated		

ld	Description	API/CAT RE Expectation	APDU Expectation
6	Allocate 4 timers Applet3		
	1- an envelope menu selection is send to trigger Applet3		
	2- Applet3 allocates 4 timers	2-No exception shall be thrown	
7	Allocate one more timer Applet3		
	1- Applet3 allocates one more timer	1- Shall throw a ToolkitException with reason NO_TIMER_AVAILABLE	
8	Check that each timerId (allocated by Applet2 and applet3) is between 1 and 8 and is different from each other		

5.5.7.3 Item Identifier

Test Area Reference: Cre_Tin_Itid

5.5.7.3.1 Conformance requirement

5.5.7.3.1.1 Normal execution

- CRRN1: If the requested item identifier in the range [1 to 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].

5.5.7.3.1.2 Parameter errors

• CRRP1: If the requested item identifier is in the range [128,255], then the card shall reject the install command.

5.5.7.3.1.3 Context errors

• CRRC1: If the requested item identifier in the range [1 to 127] is already allocated, then the card shall reject the install command.

5.5.7.3.2 Test area files

Test Source: Test_Cre_Tin_Itid.java.

Test Applet: Cre_Tin_Itid_1.java.

Cre_Tin_Itid_2.java.

Cre_Tin_Itid_3.java.

Cap File: Cre_tin_itid.cap.

5.5.7.3.3 Test coverage

CRR number	Test case number
CRRN1	2
CRRN2	4, 5, 6
CRRP1	1
CRRC1	3

5.5.7.3.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Bad installation of Applet1	•	·
	1- Installation of Applet1 The following parameters item Id equal to 128		1- The installation failed with the status word 6A80
	2- Applet1 is selected		2- Applet1 is not found, RAPDU != <applet selected<br="">data> 90 00</applet>
2	Good installation of Applet1		
	<pre>1- Installation of Applet1 Item Id = 1 for the first menu and 127 for the second one</pre>		
	2- A Terminal Profile is sent to the card with only PROFILE_DOWNLOAD, MENU_SELECTION, SET_UP_MENU and COMMAND_RESULT facilities.		2- The UICC answers with status words 91xx to send back to the ME the 2 new menus
			The menus are (position/itemId/text) 01/01/menu11 02/127/menu12
3	Bad installation of Applet2 Item identifier already allocated		
	1- Installation of Applet2 item Id = 127		1- The installation failed with the status word 6A80
	2- Applet2 is selected		
			2- Applet2 is not found, RAPDU != <applet selected<br="">data> 90 00</applet>
4	Good installation of Applet2		
	1- Installation of Applet2 item Id = 0		1- The UICC answers 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		
	1- Installation of Applet3 item Id = 0		1- The UICC answers 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

ld	Description	API/CAT RE Expectation	APDU Expectation
6	Good deletion and installation of Applet2		
	1- Delete instance of Applet2		1- The UICC answers with status words 91xx to send back to the ME the 3 menus
	2- Install for install of Applet2 item Id = 0		The menus are 01/01/menu11 02/127/menu12 03/129/menu31
	Teem 14 - 0		3- The UICC answers 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

5.5.7.4 Item Position

Test Area Reference: Cre_Tin_Itpo.

5.5.7.4.1 Conformance requirement

5.5.7.4.1.1 Normal execution

- CRRN1: If the new Menu Entry has to be inserted at an already occupied position, the entries from the requested position to the last element of the Menu Entries' list are shifted to the next positions.
- CRRN2: If the position indicated is greater than the number of elements in the Menu Entries' list, then the Menu Entry takes the last position in the Menu Entries' list.
- CRRN3: If the position indicated is equal to '00', then the Menu Entry takes the last position in the Menu Entries' list.

5.5.7.4.1.2 Parameter errors

No requirements.

5.5.7.4.1.3 Context errors

No requirements.

5.5.7.4.2 Test area files

Test Source: Test_Cre_Tin_Itpo.java.

Test Applet: Cre_Tin_Itpo_1.java.

Cre_Tin_Itpo_2.java.

Cre_Tin_Itpo_3.java.

Cre_Tin_Itpo_4.java.

Cre_Tin_Itpo_5.java.

Cre_Tin_Itpo_6.java.

Cap File: Cre_tin_itpo.cap.

5.5.7.4.3 Test coverage

CRR number	Test case number
CRRN1	1 to 10
CRRN2	5
CRRN3	4

5.5.7.4.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Installation of Applet1		
	1- Install Applet1 Position/ItemId 01/01 02/02 03/03		1- The UICC answers to the Envelope with status words 91xx to send back to the ME the 4 menus
	04/04		The menus are (position ⁽¹⁾ /itemId/text) 01/01/menu11 02/02/menu12 03/03/menu13 04/04/menu14
			(1) position is the position in the set up menu proactive command
2	Installation of Applet2		
	1- Install Applet2 Position/ItemId 03/05		1- The UICC answers to the Envelope with status words 91xx to send back to the ME the 5 menus
			The menus are (position/itemId/text) 01/01/menu11 02/02/menu12 03/05/menu21 04/03/menu13 05/04/menu14
3	Installation of Applet3		
	1- Install Applet3 Position/ItemId 02/06 03/07		1- The UICC answers to the Envelope with status words 91xx to send back to the ME the 7 menus
			The menus are (position/itemId/text) 01/01/menu11 02/06/menu31 03/07/menu32 04/02/menu12 06/05/menu21 07/03/menu13 08/04/menu14

ld	Description	API/CAT RE Expectation	APDU Expectation
4	Installation of Applet4		
	1- Install Applet4 Position/ItemId 00/08		1- The UICC answers to the Envelope with status words 91xx to send back to the ME the 8 menus
			The menus are (position/itemId/text) 01/01/menu11 02/06/menu31 03/07/menu32 04/02/menu12 06/05/menu21 07/03/menu13 08/04/menu14 09/08/menu41
5	Installation of Applet5		
	1- Install Applet5 Position/ItemId 20/09		1- The UICC answers to the Envelope with status words 91xx to send back to the ME the 9 menus The menus are (position/itemId/text)
			01/01/menu11 02/06/menu31 03/07/menu32 04/02/menu12 06/05/menu21 07/03/menu13 08/04/menu14 09/08/menu41 10/09/menu51
6	Disabling of the first menu of Applet1 and locking of Applet2		
	1- An envelope menu selection is sent with Item Id = 02	1- Applet1 is triggered	
	2- Applet1 disables its first menu (Item Id = 01)		2- The UICC answers to the Envelope with status words 91xx to send back to the ME the 08 menus
			The menus are (position/itemId/text) 01/06/menu31 02/07/menu32 03/02/menu12 05/05/menu21 06/03/menu13 07/04/menu14 08/08/menu41 09/09/menu51
	3- Lock the Applet2		3- The UICC answers to the Envelope with status words 91xx to send back to the ME the 07 menus
			The menus are (position/itemId/text) 01/06/menu31 02/07/menu32

ld	Description	API/CAT RE Expectation	APDU Expectation
	2000,		03/02/menu12 05/03/menu13 06/04/menu14 07/08/menu41 08/09/menu51
7	Installation of Applet6		
	1- Install Applet6 Position/ItemId 01/10 04/11 15/12		1- The UICC answers to the Envelope with status words 91xx to send back to the ME the 10 menus
			The menus are (position/itemId/text) 01/10/menu61 02/06/menu31 03/11/menu62 04/07/menu32 05/02/menu12 07/03/menu13 08/04/menu14 09/08/menu41 10/09/menu51 11/12/menu63
8	Enabling of the first menu of Applet1 and unlocking of Applet2		
	1- An envelope menu selection is sent with Item Id = 02	1- Applet1 is triggered	
	2- Applet1 enables its first menu (Item Id = 01)		2- The UICC answers to the Envelope with status words 91xx to send back to the ME the 11 menus The menus are
	3- Unlock the Applet2		(position/itemId/text) 01/10/menu61 02/01/menu11 03/06/menu31 04/11/menu62 05/07/menu32 06/02/menu12 08/03/menu13 09/04/menu14 10/08/menu41 11/09/menu51 12/12/menu63
			3- The UICC answers to the Envelope with status words 91xx to send back to the ME the 12 menus
			The menus are (position/itemId/text) 01/10/menu61 02/01/menu11 03/06/menu31 04/11/menu62 05/07/menu32 06/02/menu12 08/05/menu21 09/03/menu13 10/04/menu14 11/08/menu41 12/09/menu51 13/12/menu63

ld	Description	API/CAT RE Expectation	APDU Expectation
09	Deletion of Applet2		
	1- Delete Applet2		1- The UICC answers to the Envelope with status words 91xx to send back to the ME the 11 menus
			The menus are (position/itemId/text) 01/10/menu61 02/01/menu11 03/08/menu31 04/11/menu62 05/07/menu32 06/02/menu12 08/03/menu13 09/04/menu14 10/08/menu61 11/09/menu51
			12/12/menu63
10	Installation of Applet2		
	1- Install Applet2 Position/ItemId 03/05		1- The UICC answers to the Envelope with status words 91xx to send back to the ME the 12 menus
			The menus are (position/itemId/text) 01/10/menu61 02/01/menu11 03/05/menu21 04/06/menu31 05/11/menu62 06/07/menu32 07/02/menu12 09/03/menu13 10/04/menu14 11/08/menu41 12/09/menu51 13/12/menu63

5.5.7.5 Maximum Text Length for a menu entry

Test Area Reference: Cre_Tin_Mlme.

5.5.7.5.1 Conformance requirement

5.5.7.5.1.1 Normal execution

• CRRN1: The maximum length of item text string is defined at the installation of the toolkit applet.

5.5.7.5.1.2 Parameter 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.

5.5.7.5.1.3 Context errors

5.5.7.5.2 Test area files

Test Source: Test_Cre_Tin_Mlme.java.

Test Applet: Cre_Tin_Mlme_1.java.

Cap File: Cre_tin_mlme.cap.

5.5.7.5.3 Test coverage

CRR number	Test case number
CRRN1	1, 3, 4
CRRP1	2
CRRP2	5

5.5.7.5.4 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 3 menu entries		
	allowed and max. text length equal to 10.		
	initMenuEntry defined at the install		
	(install) command		
	MenuEntry = "MenuEntry1", "MenuEntry2"		
	Offset = 0		
	Length = 10 NextAction = '00'		
	HelpSupported = false		
	IconQualifier = '00'		
	IconIdentifier = 0		
2	initMenuEntry with a too large length		
-			
	initMenuEntry with length equal to 11	ToolkitException	
	MenuEntry = " MenuEntry03"	ALLOWED_LENGTH_EXCEEDED	
	Offset = 0	is thrown	
	Length = 11	13 tillowii	
	NextAction = '00'		
	HelpSupported = false		
	<pre>IconQualifier = '00' IconIdentifier = 0</pre>		
	Confidencifier = 0		
3	initMenuEntry with a right length		
	initMenuEntry with length parameter equal		a SET UP MENU (3 items)
	to 10		is issued with TLV item
	MenuEntry = " MenuEntry3"		length equal to 11 (Identifier
	Offset = 0 Length = 10		+ Text string of item)
	NextAction = '00'		3 ,
	HelpSupported = false		
	IconQualifier = '00'		
	Itconguatities = 00		
	IconIdentifier = 0		
4	~		
4	IconIdentifier = 0 changeMenuEntry with a right length		- OFT LID MENULYO :
4	IconIdentifier = 0 changeMenuEntry with a right length Applet1 is triggered by a		a SET UP MENU (3 items)
4	IconIdentifier = 0 changeMenuEntry with a right length Applet1 is triggered by a EVENT_MENU_SELECTION.		is issued with TLV item
4	IconIdentifier = 0 changeMenuEntry with a right length Applet1 is triggered by a		is issued with TLV item length equal to 11 (Identifier
4	IconIdentifier = 0 changeMenuEntry with a right length Applet1 is triggered by a EVENT_MENU_SELECTION. changeMenuEntry of menu 1, with length		is issued with TLV item
4	IconIdentifier = 0 changeMenuEntry with a right length Applet1 is triggered by a EVENT_MENU_SELECTION. changeMenuEntry of menu 1, with length parameter equal to 10 Id = '01' MenuEntry = "MenuEntry4"		is issued with TLV item length equal to 11 (Identifier
4	IconIdentifier = 0 changeMenuEntry with a right length Applet1 is triggered by a EVENT_MENU_SELECTION. changeMenuEntry of menu 1, with length parameter equal to 10 Id = '01' MenuEntry = "MenuEntry4" Offset = 0		is issued with TLV item length equal to 11 (Identifier
4	IconIdentifier = 0 changeMenuEntry with a right length Applet1 is triggered by a EVENT_MENU_SELECTION. changeMenuEntry of menu 1, with length parameter equal to 10 Id = '01' MenuEntry = "MenuEntry4" Offset = 0 Length = menuEntry.length		is issued with TLV item length equal to 11 (Identifier
4	IconIdentifier = 0 changeMenuEntry with a right length Applet1 is triggered by a EVENT_MENU_SELECTION. changeMenuEntry of menu 1, with length parameter equal to 10 Id = '01' MenuEntry = "MenuEntry4" Offset = 0 Length = menuEntry.length NextAction = 0		is issued with TLV item length equal to 11 (Identifier
4	IconIdentifier = 0 changeMenuEntry with a right length Applet1 is triggered by a EVENT_MENU_SELECTION. changeMenuEntry of menu 1, with length parameter equal to 10 Id = '01' MenuEntry = "MenuEntry4" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false		is issued with TLV item length equal to 11 (Identifier
4	IconIdentifier = 0 changeMenuEntry with a right length Applet1 is triggered by a EVENT_MENU_SELECTION. 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		is issued with TLV item length equal to 11 (Identifier
4	IconIdentifier = 0 changeMenuEntry with a right length Applet1 is triggered by a EVENT_MENU_SELECTION. changeMenuEntry of menu 1, with length parameter equal to 10 Id = '01' MenuEntry = "MenuEntry4" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false		is issued with TLV item length equal to 11 (Identifier

ld	Description	API / Framework Expectation	APDU Expectation
5	changeMenuEntry with a too large length		
	Applet1 is triggered by a EVENT_MENU_SELECTION. ChangeMenuEntry of menu 1, with length parameter equal to 11 Id = '02' MenuEntry = "MenuEntry05" Offset = 0 Length = menuEntry.length NextAction = 0 HelpSupported = false IconQualifier = 0 IconIdentifier = 0	ToolkitException ALLOWED_LENGTH_EXCEEDED is thrown	SW = 90 00
	Return from processToolkit		

5.5.7.6 Maximum number of menu entries

Test Area Reference: Cre_Tin_Nbme.

5.5.7.6.1 Conformance requirement

5.5.7.6.1.1 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.

5.5.7.6.1.2 Parameter errors

• CRRP1: If the menu entry cannot be initialized (e.g. no more item data in applet loading parameter), a ToolkitException with the REGISTRY_ERROR reason code is thrown.

5.5.7.6.1.3 Context errors

No requirements.

5.5.7.6.2 Test area files

Test Source: Test_Cre_Tin_Nbme.java.

Test Applet: Cre_Tin_Nbme_1.java.

Cre_Tin_Nbme_2.java.

Cap File: Cre_tin_nbme.cap.

5.5.7.6.3 Test coverage

CRR number	Test case number
CRRN1	1
CRRP1	2, 3

5.5.7.6.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Installation of applet with 3 menus		-
	<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 = "menu1", "menu2", "menu3" Offset = 0 Length = 5 NextAction = '00' HelpSupported = false IconQualifier = '00'</pre>	No Exception is thrown	
2	IconIdentifier = 0 init of a 4 th menu		
	<pre>initMenuEntry one more time MenuEntry = "menu4" Offset = 0 Length = 5 NextAction = '00' HelpSupported = false IconQualifier = '00' IconIdentifier = 0</pre>	ToolkitException REGISTRY_ERROR is thrown	SET UP MENU (3 items: "menu1", "menu2", "menu3")
3	Installation of 2 nd applet with 0 menu		
	1- Install (install) another applet, with max. number of menu entry is '0', defined at the install (install) command. initMenuEntry once	ToolkitException REGISTRY_ERROR is thrown	
	MenuEntry = "menu5" Offset = 0		
	Length = 5		
	NextAction = '00'		
	<pre>HelpSupported = false IconOualifier = '00'</pre>		
	IconIdentifier = 0		
	2- Perform a RESET and a Terminal Profile with the facilities of PROFILE_DOWNLOAD, MENU_SELECTION, COMMAND_RESULT and SET UP MENU		2- SET UP MENU (3 items: "menu1", "menu2", "menu3")

5.5.7.7 Access Domain

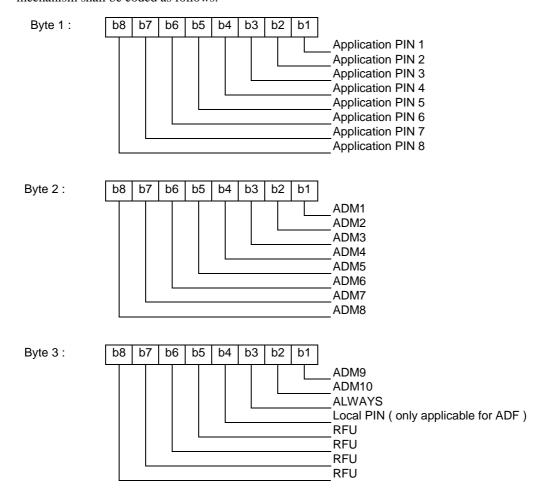
Test Area Reference: Cre_Tin_Acdo.

5.5.7.7.1 Conformance requirement

5.5.7.7.1.1 Normal execution

- CRRN1: The UICC access specific parameters (Tag 80h) indicate the mechanism used to control the application instance access to the File System ('00' means full access to the File System, '02' means UICC access mechanism and 'FF' means no access to the File System).
- CRRN2: The UICC access specific parameters are applicable to applications using the *uicc.access.FileView* defined in ETSI TS 102 241 [9].
- CRRN3: The UICC administrative access parameter (Tag 83h) indicate the mechanism used to control the application instance access to the File System ('00' means full access to the File System, '02' means UICC access mechanism and 'FF' means no access to the File System).
- CRRN4: The UICC administrative access parameters are applicable to applications using the *uicc.access.fileadministration.AdminFileView* defined in ETSI TS 102 241 [9].

- CRRN5: If an application has Access Domain Parameter '00' (i.e. Full Access to the File System), all actions can be performed on a file except the ones with NEVER access condition.
- CRRN6: If an application has Access Domain Parameter '02' (i.e. UICC access mechanism). The UICC access mechanism shall be coded as follows:



These access rights shall be checked against SE ID 01 access rules as defined in ETSI TS 102 221 [5].

5.5.7.7.1.2 Parameter 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 application with Access Domain Parameter 'FF' (i.e. No Access to the File System) tries to access a file the CAT Runtime Environement shall throw a UICCException with a SECURITY_STATUS_NOT_SATISFIED reason.
- CRRP3: If an application with Access Domain Parameter '02' (i.e. UICC access mechanism) tries to access a file without the correct rights, the CAT Runtime Environement shall throw a UICCException with a SECURITY_STATUS_NOT_SATISFIED reason.

5.5.7.7.1.3 Context errors

5.5.7.7.2 Test area files

Test Source: Test_Cre_Tin_Acdo.java.

Test Applet: Cre_Tin_Acdo_1.java.

Cre_Tin_Acdo_2.java.

Cre_Tin_Acdo_3.java.

Cre_Tin_Acdo_4.java.

 $Cre_Tin_Acdo_5.java.$

Cre_Tin_Acdo_6.java.

 $Cre_Tin_Acdo_7.java.$

Cre_Tin_Acdo_8.java.

Cap File: Cre_tin_acdo.cap.

5.5.7.7.3 Test coverage

CRR number	Test case number
CRRN1	1 to 6
CRRN2	1 to 6
CRRN3	1 to 6
CRRN4	1 to 6
CRRN5	1
CRRN6	3 to 6
CRRP1	Not tested
CRRP2	2
CRPP3	3 to 6

5.5.7.7.4 Test procedure

The following table summarizes tests performed in the test procedure.

			Linear fix							
		Transparent files(EF _{TARRx})								
Applet rights	File rights	Activate	Deactivate	Read Bin/Rec	Update Bin/Rec	Search	Increase	Create	Delete	Resize
	Always (EF _{xARR1})	OK	ОК	OK	OK	OK	OK	OK	ОК	OK
	Never (EF _{xARR2})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
Full	Global PIN1 & ADM1 (EF _{xARR3})	OK	OK	ОК	OK	OK	ОК	OK	ОК	ОК
access	Global PIN1 ADM1 (EF _{xARR4})	OK	ОК	ОК	ОК	OK	OK	OK	ОК	ОК
	Local PIN 1 / ADM2 (See note) (EF _{xARR5})	ОК	OK	ОК	ОК	ОК	ОК	ОК	ОК	OK

Cyclic files (EF_{CARRx})

Cyclic files (EF _{CARRx})							
Linear fixed files(EF _{LARRx})							
Transparent files(EF _{TARRx})							

Applot	1		<u> </u>	Read	Update					
rights	File rights	Activate	Deactivate	Bin/Rec	Bin/Rec	Search	Increase	Create	Delete	Resize
	Always (EF _{xARR1})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
	Never (EF _{xARR2})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
No Access	Global PIN1 & ADM1 (EF _{xARR3})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
	Global PIN1 ADM1 (EF _{xARR4})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
No	Local PIN 1 / ADM2 (See note) (EF _{xARR5})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
	Always (EF _{xARR1})	OK	OK	OK	OK	OK	OK	OK	OK	OK
	Never (EF _{xARR2})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
Always	Global PIN1 & ADM1 (EF _{xARR3})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
	Global PIN1 ADM1 (EF _{xARR4})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
	Local PIN 1 / ADM2 (See note) (EF _{xARR5})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
	Always (EF _{xARR1})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
	Never (EF _{xARR2})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
	Global PIN1 & ADM1 (EF _{xARR3})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
	Global PIN1 ADM1 (EF _{xARR4})	ОК	ОК	ОК	ОК	ОК	OK	ОК	ОК	ОК
	Local PIN 1 / ADM2 (See note) (EF _{xARR5})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
	Always (EF _{xARR1})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
	Never (EF _{xARR2})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
PIN1 &	Global PIN1 & ADM1 (EF _{xARR3})	ОК	ОК	ОК	OK	OK	OK	OK	ОК	ОК
ADM1	Global PIN1 ADM1 (EF _{xARR4})	ОК	OK	ОК	OK	OK	OK	OK	ОК	OK
	Local PIN 1 / ADM2 (See note) (EF _{xARR5})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
Local PIN &	Always (EF _{xARR1})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
ADM2	Never (EF _{xARR2})	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK

		Cyclic files (EF _{CARRx})]		
			Linear fixed files(EF _{LARRx})							
Applet rights Global PIN1 & ADM1 (EF _{xARR3}) Global PIN1 ADM1 (EF _{xARR4}) Local PIN 1 / ADM2 (See		Transparent fil	les(EF _{TARRx})							
	File rights	Activate	Deactivate	Read Bin/Rec	Update Bin/Rec	Search	Increase	Create	Delete	Resize
	& ADM1	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
	Global PIN1 ADM1	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK	NOK
	Local PIN 1 /	ОК	ОК	ОК	ОК	ОК	ОК	ок	ОК	OK
NOTE:			ess condition	is Local PI	N 1 if the fi	le is locate	d under the N	MF and AD	M2 if it is	;

ETSI

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Full access Applet		·
	0- Applet1 installation with full access right		
	1- Send an envelope Menu Selection to trigger Applet1 on menu Id 1	1- Applet1 is triggered and gets Fileviews on UICC and ADF1	1- SW = 90 00
		1.1- For each EF _{CARRX} Applet1 calls all associated methods with success, except on file EF _{CARR2} where UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	
		1.2- For each EF _{LARRx} Applet1 calls all associated methods with success, except on file EF _{LARR2} where UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	
		1.3- For each EF _{TARRx} Applet1 calls all associated methods with success, except on file EF _{TARR2} where UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	
	2- Send an envelope Menu Selection to trigger Applet1 on menu Id 2	2- Applet1 is triggered and gets AdminFileviews on UICC and ADF1	2- SW = 90 00
		2.1- For each EF _{CARRX} Applet1 calls all associated methods with success, except on file EF _{CARR2} where UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	
		2.2- For each EF _{LARRx} Applet1 calls all associated methods with success, except on file EF _{LARR2} where UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	
		2.3- For each EF _{TARRx} Applet1 calls all associated methods with success, except on file EF _{TARR2} where UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	
		2.4- Under each DF _{ARRx} Applet1 resize the EF _{TARXT} with success, except on file EF _{TAR2T} where an UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown.	
		2.5- Under each DF _{ARRx} Applet1 delete the EF _{TARxT} with success, except on file EF _{TAR2T} where an UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown.	
		2.6- Under each DF _{ARRx} Applet1 create the EF _{TARxT} with success, except under DF _{ARR2} where an UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown at creation of a file similar to EF _{TAR2T} .	
	3- Applet1 deletion		

ld	Description	API/CAT RE Expectation	APDU Expectation
2	No access Applet		
	0- Applet2 installation with no access right		
	1- Send an envelope Menu Selection to trigger Applet2 on menu Id 1	1- Applet2 is triggered and gets Fileviews on UICC and ADF1	1- SW = 90 00
		1.1- For each EF _{CARRx} Applet2 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	
		1.2- For each EF _{LARRx} Applet2 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	
		1.3- For each EF _{TARRx} Applet2 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	
	2- Send an envelope Menu Selection to trigger Applet2 on menu Id 2	2- Applet2 is triggered and gets AdminFileviews on UICC and ADF1	2- SW = 90 00
		2.1- For each EF _{CARRx} Applet2 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	
		2.2- For each EF _{LARRx} Applet2 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	
		2.3- For each EF _{TARRx} Applet2 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	
		2.4- Under each DF _{ARRx} Applet2 resize the EF _{TARXT} ; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	
		2.5- Under each DF _{ARRx} Applet2 delete the EF _{TARXT} ; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	
	3- Applet2 deletion	2.6- Under each DF _{ARRx} Applet2 create an EF; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown.	

ld	Description	API/CAT RE Expectation	APDU Expectation
3	Always access right Applet		
	0- Applet3 installation with Always access right		
	1- Send an envelope Menu Selection to trigger Applet3 on menu Id 1	1- Applet3 is triggered and gets Fileviews on UICC and ADF1	1- SW = 90 00
		1.1- For each EF _{CARRx} Applet3 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{CARR1} where the execution is successful.	
		1.2- For each EF _{LARRx} Applet3 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{LARR1} where the execution is successful.	
		1.3- For each EF _{TARRx} Applet3 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{TARR1} where the execution is	
	2- Send an envelope Menu Selection to trigger Applet3 on menu Id 2	sucessful. 2- Applet3 is triggered and gets AdminFileviews on UICC and ADF1	2- SW = 90 00
		2.1- For each EF _{CARRx} Applet3 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{CARR1} where the execution is successful.	
		2.2- For each EF _{LARRx} Applet3 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{LARR1} where the execution is successful.	
		2.3- For each EF _{TARRx} Applet3 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{TARR1} where the execution is sucessful.	
		2.4- Under each DF _{ARRx} Applet3 resize the EF _{TARxT} ; an UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown, except on file EF _{TAR1T} where the execution is successful.	
		2.5- Under each DF _{ARRX} Applet3 delete the EF _{TARXT} ; an UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown, except on file EF _{TAR1T} where the execution is successful.	
		2.6- Under each DF $_{ARRx}$ Applet3 create an EF like the EF $_{TARxT}$; an UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown, except on file EF $_{TAR1T}$ where the execution is successful.	
	3- Applet3 deletion		

ld	Description	API/CAT RE Expectation	APDU Expectation
4	Global PIN1 access right		
	Applet 0- Applet4 installation with Global PIN1 access right		
	1- Send an envelope Menu Selection to trigger Applet4 on menu Id 1	1- Applet4 is triggered and gets Fileviews on UICC and ADF1	1- SW = 90 00
		1.1- For each EF _{CARRx} Applet4 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{CARR4} where the execution is successful.	
		1.2- For each EF _{LARRx} Applet4 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{LARR4} where the execution is successful.	
		1.3- For each EF _{TARRx} Applet4 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{TARR4} where the execution is successful.	
	2- Send an envelope Menu Selection to trigger Applet4 on menu Id 2	2- Applet4 is triggered and gets AdminFileviews on UICC and ADF1	2- SW = 90 00
		2.1- For each EF _{CARRx} Applet4 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{CARR4} where the execution is successful.	
		2.2- For each EF _{LARRx} Applet4 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{LARR4} where the execution is successful.	
		2.3- For each EF _{TARRx} Applet4 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{TARR4} where the execution is successful.	
		2.4- Under each DF _{ARRx} Applet4 resize the EF _{TARxT} ; an UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown, except on file EF _{TAR4T} where the execution is successful.	
		2.5- Under each DF _{ARRx} Applet4 delete the EF _{TARxT} ; an UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown, except on file EF _{TAR4T} where the execution is successful.	
		2.6- Under each DF _{ARRX} Applet4 create an EF like the EF _{TARXT} ; an UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown, except on file EF _{TAR4T} where the execution is successful.	
	3- Applet4 deletion		

ld	Description	API/CAT RE Expectation	APDU Expectation
5	Global PIN1 & ADM1 access	bal PIN1 & ADM1 access	
	right Applet		
	0- Applet5 installation with Global PIN1 & ADM1 access right		
	1- Send an envelope Menu Selection to trigger Applet5 on menu Id 1	1- Applet5 is triggered and gets Fileviews on UICC and ADF1	1- SW = 90 00
	approof on mond id i	1.1- For each EFCARRx Applet5 calls all associated methods;	
		UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on files EFCARR3 and EFCARR4 where the execution is successful.	
		1.2- For each EFLARRx Applet5 calls all associated methods;	
		UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on files EFCARR3 and EFCARR4 where the execution is successful.	
		1.3- For each EFTARRx Applet5 calls all associated methods;	
	2- Send an envelope Menu Selection to trigger	UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on files EFCARR3 and EFCARR4 where the execution is sucessful.	
	Applet5 on menu Id 2	2- Applet3 is triggered and gets AdminFileviews on UICC and ADF1	2- SW = 90 00
		2.1- For each EFCARRx Applet5 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on files EF _{CARR3} and EF _{CARR4} where the execution is successful.	
		2.2- For each EFLARRx Applet5 calls all associated methods;	
		UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on files EFCARR3 and EFCARR4 where the execution is successful.	
		2.3- For each EFTARRx Applet5 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED	
		are thrown, except on files EFCARR3 and EFCARR4 where the execution is sucessful.	
		2.4- Under each DFARRx Applet5 resize the EFTARxT; an UICCException.SECURITY_STATUS_NOT_SATISFIED	
		is thrown, except on files EFCARR3 and EFCARR4 where the execution is successful.	
		2.5- Under each DFARRx Applet5 delete the EF _{TARXT} ; an UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown, except on files EF _{CARR3} and EF _{CARR4} where the execution is successful.	
		2.6- Under each DFARRx Applet5 create an EF like the EF _{TARXT} ; an UICCException.SECURITY_STATUS_NOT_SATISFIED	
		is thrown, except on files EF _{CARR3} and EF _{CARR4} where the execution is successful.	
	3- Applet5 deletion		

ld	Description	API/CAT RE Expectation	APDU Expectation
6	Local Pin & ADM2 access right		
	Applet O- Applet6 installation		
	with Local PIN & ADM2 access right		
	1- Send an envelope Menu Selection to trigger Applet6 on menu Id 1	1- Applet6 is triggered and gets Fileviews on UICC and ADF1	1- SW = 90 00
		1.1- For each EF _{CARRx} Applet6 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{CARR5} where the execution	
		is successful.	
		1.2- For each EF _{LARRx} Applet6 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{LARR5} where the execution is successful.	
	2- Send an envelope Menu	1.3- For each EF _{TARRx} Applet6 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{TARR5} where the execution is sucessful.	
	Selection to trigger Applet6 on menu Id 2	2- Applet6 is triggered and gets AdminFileviews on UICC and ADF1	2- SW = 90 00
		2.1- For each EF _{CARRx} Applet6 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{CARR5} where the execution is successful.	
		2.2- For each EF _{LARRx} Applet6 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{LARR5} where the execution is successful.	
		2.3- For each EF _{TARRx} Applet6 calls all associated methods; UICCException.SECURITY_STATUS_NOT_SATISFIED are thrown, except on file EF _{TARR5} where the execution is sucessful.	
		2.4- Under each DF _{ARRx} Applet6 resize the EF _{TARXT} ; an UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown, except on file EF _{TARST} where the execution is successful.	
		2.5- Under each DF _{ARRx} Applet6 delete the EF _{TARxT} ; an UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown, except on file EF _{TARST} where the execution is successful.	
		2.6- Under each DF _{ARRx} Applet6 create an EF like the EF _{TARxT} ; an UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown, except on file EF _{TARST} where the execution is successful.	
	3- Applet6 deletion		

ld	Description	API/CAT RE Expectation	APDU Expectation
7	AdminFileview and Fileview acces domain parameter		
	differenciation		
	0- Applet7 installation with Always & ADM1 access right for Fileview access domain		
	1- Send an envelope Menu Selection on menu id 1 to	1- Applet7 is triggered and gets Fileview on UICC.	1- SW = 90 00
	trigger Applet7	1.1- Using the Fileview, Applet7 reads file EF _{TARR1} . No exception is expected	
		1.2- Using the Fileview, Applet7 reads file EF _{TARR5} . An UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown	
		1.3- Using the Fileview, Applet7 reads file EF_TARR4 . No exception is expected	
	2- Applet7 deletion		
	3- Applet7 installation with Global PIN1 & ADM2 access right for AdminFileView access domain	4- Applet7 is triggered and gets AdminFileview on UICC.	
	4- Send an envelope Menu Selection on menu id 2 to	4.1- Using the AdminFileview, Applet7 reads file	4- SW = 90 00
	trigger Applet7	EF _{TARR1} . An UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown	
		4.2- Using the AdminFileview, Applet7 reads file EF _{TARR5} . No exception is expected	
	5- Applet7 deletion	4.3- Using the AdminFileview, Applet7 reads file EF _{TARR4} . No exception is expected	
	6- Applet7 installation with Always & ADM1 access right for Fileview access domain and Global PIN1 & ADM2 access right for AdminFileView access domain,		
	7- Send an envelope Menu Selection on menu id 3 to	7- Applet7 is triggered and gets Fileview and AdminFileview on UICC.	7- SW = 90 00
	trigger Applet7	7.1- Using the Fileview, Applet7 reads file EF_TARR1 . No exception is expected	
		7.2- Using the AdminFileview, Applet7 reads file EF _{TARR1} . An UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown	
		7.3- Using the AdminFileview, Applet7 reads file EF _{TARR5} . No exception is expected	
		7.4- Using the Fileview, Applet7 reads file EF _{TARR5} . An UICCException.SECURITY_STATUS_NOT_SATISFIED is thrown	
	8- Applet7 deletion	7.5- Using the Fileview, Applet7 reads file EF _{TARR4} . No exception is expected	
		7.6- Using the AdminFileview, Applet7 reads file EF _{TARR4} . No exception is expected	

5.5.7.8 Priority Level

Test Area Reference: Cre_Tin_Prlv.

5.5.7.8.1 Conformance requirement

5.5.7.8.1.1 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).

5.5.7.8.1.2 Parameter errors

No requirements.

5.5.7.8.1.3 Context errors

No requirements.

5.5.7.8.2 Test area files

Test Source: Test_Cre_Tin_Prlv_x.java, x from 1 to 12, 8A, 8B, 9A, 9B, 10A, 10B.

Test Applet: Cre_Tin_Prlv_x.java, x from 1 to 12, 8A, 8B, 9A, 9B, 10A, 10B.

Cap File: Cre_tin_prlv_x.cap, x from 1 to 12, 8A, 8B, 9A, 9B, 10A, 10B.

5.5.7.8.3 Test coverage

CRR number	Test case number
CRRN1	1, 2, 3, 4, 6, 8, 10, 12
CRRN2	5, 7, 9, 11

5.5.7.8.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
0	All applets are registered on an		
	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event		
1	Trigger 2 applets with 2 different maximum		ļ
	Priority Levels		
	1- Install (install) Applet1 with priority level '2' and Applet2 with priority level '1', from package Cre_tin_prlv_1		
	2- Send an Envelope that triggers the 2 applets with the EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event	2- A static variable is used to validate triggering order: Applet2 is triggered before Applet1	
	3- Delete applets instances and packages		

ld	Description	API/CAT RE Expectation	APDU Expectation
2	Trigger 2 applets with 2 different maximum	_	-
	Priority Levels		
	-		
	1- Install (install) Applet1 with priority		
	level '1' and Applet2 with priority level '2', from package Cre tin prlv 2.		
	_ ,		
	2- Send an Envelope that triggers the 2	2- A static variable is used to	
	applets with the	validate triggering order: Applet1 is triggered before Applet2	
	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event.	linggered before Appletz	
	3- Delete applets instances and packages		
3	Trigger 2 applets with 2 different Priority		
	Levels		
	1- Install (install) Applet1 with		
	priority level '80' and Applet2 with		
	priority level '7F', from package		
	Cre_tin_prlv_3.		
	2- Send an Envelope that triggers the 2	2- A static variable is used to	
	applets with the	validate triggering order: Applet2 is	
	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event	triggered before Applet1	
	3- Delete applets instances and packages		
4	Trigger 2 applets with 2 different Priority		
'	Levels		
	1- Install (install) Applet1 with		
	priority level '7F' and Applet2 with priority level '80', from package		
	Cre tin prlv 4		
	2- Send an Envelope that triggers the 2	2- A static variable is used to	
	applets with the EVENT EVENT DOWNLOAD USER ACTIVITY event	validate triggering order: Applet2 is triggered before Applet1	
	2.2.1_2.2.1_20.1.20.12_0.211.011.111 0.010	linggered before Applet 1	
	3- Delete applets instances and packages		
5	Trigger 3 applets with the same Priority Level		
	migger o applete with the came i flority Level		
	1- Install (install) applet 1, 2, 3 in		
	this order with same priority level from package Cre tin prlv 5		
	2- Send an Envelope that triggers the 3	2- A static variable is used to	
	applets with the	validate triggering order: Applet3 is triggered before Applet2, and	
	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event	Applet2 is triggered before Applet1	
		Applete is inggered before Applet I	
<u> </u>	3- Delete applets instances and packages		
6	Trigger 2 applets from 2 classes, with 2		
	different Priority Level		
	1- Install (install) Applet1 from class A		
	with priority level '2'		
	Install (install) Applet2 from class B		
	with priority level '1'		
	2- Send an Envelope that triggers the 2	2- A static variable is used to	
	applets with the	validate triggering order: Applet2 is	
	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event	triggered before Applet1	
	3- Delete applets instances and packages		
<u> </u>	2- perece abbrecs inscances and backages		

ld	Description	API/CAT RE Expectation	APDU Expectation
7	Trigger 2 applets from 2 classes, with the same		•
	Priority Level		
	1- Install (install) Applet1 from class A with priority level '1'		
	Install (install) Applet2 from class B		
	with priority level '1'		
	2- Send an Envelope that triggers the 2 applets with the	2- A static variable is used to	
	EVENT EVENT DOWNLOAD USER ACTIVITY event	validate triggering order: Applet2 is	
		triggered before Applet1	
	3- Delete applets instances and packages		
8	Trigger 2 applets from 2 packages, with 2		
	different Priority Level		
	1- Install package Cre tin prlv 8.		
	Install (install) Applet1 from package		
	Cre_tin_prlv_8A with priority level '2'		
	Install (install) Applet2 from package		
	Cre_tin_prlv_8B with priority level '1'		
	2- Send an Envelope that triggers the 2	2- A static variable is used to	
	applets with the	validate triggering order: Applet2 is	
	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event	triggered before Applet1	
	3- Delete applets instances ad packages		
9	Trigger 2 applets from 2 packages, with the		
	same Priority Level		
	1- Install package Cre tin prlv 9.		
	Install (install) Applet1 from package		
	Cre_tin_prlv_9A and Applet2 from package		
	Cre_tin_prlv_9B in this order, with same		
	priority level		
	2- Send an Envelope that triggers the 2	2- A static variable is used to	
	applets with the	validate triggering order: Applet2 is	
	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event	triggered before Applet1	
L	3- Delete applets instances and packages		
10	Trigger 4 applets from 2 packages		
	1 Install maskages (re tin male 10		
	<pre>1- Install packages Cre_tin_prlv_10, Cre_tin_prlv_10A and Cre_tin_prlv_10B</pre>		
	Install (install) 2 applets 1 then 2 from		
	package Cre_tin_prlv_10A, with		
	respectively priority levels 1 and 2		
	2- Send an Envelope that triggers the 2	2- A static variable is used to	
	applets with the	validate triggering order: Applet1	
	EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event	is triggered before Applet2	
1			
	3- Install (install) 2 applets 3 then 4		
	<pre>from package Cre_tin_prlv_10B, with respectively priority levels 1 and 2</pre>		
	respectively biloticy levels I amd 2		
	4- Send an Envelope that triggers the 4	4- Applet3 is triggered before	
	applets	applets 1, 4, then 2	
	5- Delete applets instances and packages		
<u></u>	D- Detere abbiers ingrances and backages	1	

ld	Description	API/CAT RE Expectation	APDU Expectation
11	Trigger 4 applets with the same Priority Level then delete them one after another and trigger them each time		·
	<pre>1- Install (install) applets 1, 2, 3, 4 in this order with same priority level from package Cre_tin_prlv_11</pre>		
	2- Send an Enveloppe that triggers the 4 applets with the EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event	2- A static variable is used to validate triggering order: applets are triggered in order 4, 3, 2, 1	
	3- Delete applet instance 4		
	4- Send an Enveloppe that triggers the 3 applets with the EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event	4- Applets are triggered in order 3, 2, 1	
	5- Delete applet instance 3	6 Applete are triggered in order 2	
	6- Send an Enveloppe that triggers the 2 applets with the EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event	6- Applets are triggered in order 2, 1	
	7- Delete remaining applet instances and packages		
12	Trigger 5 applets with different Priority Levels, alternating install and delete		
	1- Install (install) applets 1, 2, 3, 4 in this order with respective priority levels 1, 2, 1, 2		
	2- Send an Enveloppe that triggers the 4 applets with the EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event	2- A static variable is used to validate triggering order: applets are triggered in order 3, 1, 4, 2	
	3- Delete applet instance 1 and install (install) applet5 with priority level 2		
	4- Send an Enveloppe that triggers the 4 applets with the EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event	4- Applets are triggered in order 3, 5, 4, 2	
	5- Re-install (install) Applet1 with priority level 1		
	6- Send an Enveloppe that triggers the 5 applets with the EVENT_EVENT_DOWNLOAD_USER_ACTIVITY event	6- Applets are triggered in order 1, 3, 5, 4, 2	

5.5.7.9 Channel Allocation

Test Area Reference: Cre_Tin_Chal.

5.5.7.9.1 Conformance requirement

5.5.7.9.1.1 Normal execution

• CRRN1: One toolkit applet can register to several channels, but a channel can only be allocated to one toolkit applet.

5.5.7.9.1.2 Parameter errors

No requirements.

5.5.7.9.1.3 Context errors

- CRRC1: Allocated channels shall not exceed the maximum number of channels allowed for this applet instance
- CRRC2: The total number of channels allocated for all the applets shall not exceed 7. If the maximum number of channels required is greater than '07' (maximum numbers of channels specified in ETSI TS 102 223 [6]), the card shall return the Status Word '6A80', incorrect parameters in data field, to the Install(Install) command.

5.5.7.9.2 Test area files

Test Source: Test_Cre_Tin_Chal.java.

Test Applet: Cre_Tin_Chal_1.java.

Cre_Tin_Chal_2.java.

Cre_Tin_Chal_3.java.

Cap File: Cre_tin_chal.cap.

5.5.7.9.3 Test coverage

CRR number	Test case number
CRRN1	2,3
CRRC1	1, 7
CRRC2	4,5,6

5.5.7.9.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	More than 7 channels at the instantiation of Applet1: check that Applet1 is not installed		
	1-Install for install of Applet1 with maximum 8 channels allocated		
	2- Select the Applet1		2- SW = 6A 80
	Reset the card		
2	Good installation of Applet2		
	Install for install of Applet2 (maximum 4 channels allocated).		The UICC answers with status words 90 00
3	Open 4 channels Applet2	No exception shall be thrown.	OPEN CHANNEL proactive command are fetched.
	Applet2 builds a proactive command OPEN CHANNEL 4 times, calling init() and send() methods.		Successful TERMINAL RESPONSE of OPEN CHANNEL are sent to the UICC with Channel Id = 01 to 04
4	Open one more channel Applet2		
	Applet2 builds a proactive command OPEN CHANNEL once again, calling init() and send() methods	Shall throw a ToolkitException with reason COMMAND_NOT_ALLOWED	
5	Good installation of applet3		
	Install for install of Applet3 (maximum 7 channels allocated)		The UICC answers with status words 90 00

ld	Description	API/CAT RE Expectation	APDU Expectation
6	Open 3 channels Applet3		
	Applet3 builds a proactive command OPEN CHANNEL 3 times, calling init() and send()	No exception shall be thrown.	OPEN CHANNEL proactive command is fetched
	methods		Successful TERMINAL RESPONSE of OPEN CHANNEL are sent to the UICC with Channel Id from 05 to 07
7	Open one more channel Applet3		
	Applet3 builds a proactive command OPEN CHANNEL once again, calling init() and send() methods	No exception shall be thrown.	OPEN CHANNEL proactive command is fetched. Unsuccessful Terminal Response is sent to the UICC with 'No Channel Available' as Additional Information on Result

5.5.7.10 Minimum Security Level

Test Area Reference: Cre_Tin_Mslv.

5.5.7.10.1 Conformance requirement

5.5.7.10.1.1 Normal execution

- CRRN1: The Receiving Entity shall check the Minimum Security Level during processing the security of the Command Packet.
- CRRN2: The Receiving Entity shall reject the message if the MSL check fails.
- CRRN3: If the check fails, the Receiving Entity shall reject the messages and a Response Packet with the 'Insufficient Security Level' Response Status Code shall be sent if required.
- CRRN4: If the length of the Minimum Security Level field is greater than zero, the Minimum Security Level is used to specify the minimum level of security to be applied to Secured Packets. The first byte shall be the MSL Parameter, other bytes shall be the MSL Data.
- CRRN5: If the length of the Minimum Security Level field is zero, no minimum security level check shall be performed by the receiving entity.

5.5.7.10.1.2 Parameter errors

No requirements.

5.5.7.10.1.3 Context errors

No requirements.

5.5.7.10.2 Test area files

None.

5.5.7.10.3 Test coverage

CRR number	Test case number
CRRN1	Not applicable
CRRN2	Not applicable
CRRN3	Not applicable
CRRN4	Not applicable
CRRN5	Not applicable

5.5.7.10.4 Test procedure

Not applicable.

5.5.7.11 TAR Value(s) of the Toolkit Application instance

Test Area Reference: Cre_Tin_Tarv.

5.5.7.11.1 Conformance requirement

5.5.7.11.1.1 Normal execution

- CRRN1: It is possible to define several TAR Values at the installation of a Toolkit Application.
- CRRN2: If the length of TAR Value(s) is zero, the TAR may be taken out of the AID, if any.
- CRRN3: If the length of the TAR Value(s) is greater than zero then the application instance shall be installed with the TAR Value(s) field defined above and the TAR indicated in the AID if any shall be ignored.

5.5.7.11.1.2 Parameter errors

No requirements.

5.5.7.11.1.3 Context errors

- CRRC1 If a TAR Value(s) is already assigned on the card for a Toolkit Application instance, the card shall return the Status Word '6A80', incorrect parameters in data field, to the INSTALL [for install] command.
- CRRC1 If the length of TAR Value(s) field is incorrect, the card shall return the Status Word '6A80', incorrect parameters in data field, to the INSTALL [for install] command.

5.5.7.11.2 Test area files

Test Source: Test_Cre_Tin_Tarv.java.

Test Applet: Cre_Tin_Tarv_1.java.

Cre_Tin_Tarv_2.java.

Cap File: Cre_tin_tarv.cap.

5.5.7.11.3 Test coverage

CRR number	Test case number
CRRN1	1 (but partially tested only)
CRRN2	Not applicable
CRRN3	Not applicable
CRRC1	1
CRRC2	2

5.5.7.11.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	TAR value(s) already allocated 1- Install Applet2 with the TAR "020202"		4 0W DARRU 00 00 00
	Install Apple22 with the IAK 020202		1- SW = RAPDU = 00 90 00
	2- Install Applet1 with the TAR values: "010101" "020202"		2- SW = 6A 80
	"030303"		
2	Bad TAR value(s)		
	1- Install Applet1 with the TAR values: "010101" "0303"		1- SW = 6A 80

5.5.7.12 Services Allocation

Test Area Reference: Cre_Tin_Sval.

5.5.7.12.1 Conformance requirement

5.5.7.12.1.1 Normal execution

• CRRN1: One toolkit applet can allocates several services, but a service can only be allocated to one toolkit applet.

5.5.7.12.1.2 Parameter errors

No requirements.

5.5.7.12.1.3 Context errors

- CRRC1: Allocated services shall not exceed the maximum number of services allowed for this applet instance defined during installation.
- CRRC2: The total number of services allocated for all the applets shall not exceed 8. If the maximum number of services required is greater than '08' (maximum numbers of services specified in ETSI TS 102 223 [6]), the card shall return the Status Word '6A80', incorrect parameters in data field, to the Install(Install) command.

5.5.7.12.2 Test area files

Test Source: Test_Cre_Tin_Sval.java.

Test Applet: Cre_Tin_Sval_1.java.

Cre_Tin_Sval_2.java.

Cre_Tin_Sval_3.java.

Cap File: Cre_tin_sval.cap.

5.5.7.12.3 Test coverage

CRR number	Test case number
CRRN1	2, 3, 8
CRRC1	1, 7
CRRC2	4, 5, 6

5.5.7.12.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	More than 8 services at the instantiation of		
	Applet1: check that Applet1 is not installed.		
	1- Install Applet1 with maximum 9 services		
	allocated		
	arrosaesa		1- SW = 6A 80
	Reset the card		
2	Good installation of Applet2		
	1- Install Applet2 with maximum 4 services allocated		1- RAPDU = 00 90 00
3	Allocate 4 services	No exception shall be thrown	
	Applet2		
4	Allocate one more service	Shall throw a ToolkitException with	
	Applet2	reason	
		NO_SERVICE_ID_AVAILABLE	
5	Good installation of applet3		
	1- Install Applet3 with maximum 8 services allocated		1- RAPDU = 00 90 00
6	Allocate 4 services	No exception shall be thrown	
	Applet3		
7	Allocate one more service	Shall throw a ToolkitException with	
l'	Applet3	reason	
	PP	NO_SERVICE_ID_AVAILABLE	
8	Check that each service identifier (allocated by		
	Applet2 and applet3) is between 0 and 7 and is		
	different from each other		

5.5.8 UICC File Access

5.5.8.1 FileView

Test Area Reference: Cre_Ufa_View.

5.5.8.1.1 Conformance requirement

5.5.8.1.1.1 Normal execution

- CRRN1: Any Applet (not only Toolkit Applets) is allowed to retrieve and use a *FileView*.
- CRRN2: The UICC *FileView* can be retrieved by invoking the *getTheUICCView()* method from the *UICCSystem*.
- CRRN3: An ADF *FileView* can be retrieved by invoking the *getTheFileView(...)* method with passing as parameter the full AID of the application owning the ADF.
- CRRN4: The UICC *FileView* allows to access the MF and all DFs and EFs that are located under the MF, including DF Telecom and any access technology specific DF located under the MF, but not the files located under any ADF.
- CRRN5: An ADF *FileView* allows to access only the DFs and EFs located under the ADF.
- CRRN6: Each FileView object shall be provided as a permanent JCRE entry point object.

- CRRN7: A separate and independent file context shall be associated with each and every *FileView* object: the operation performed on files in a given *FileView* object shall not affect the file context associated with any other *FileView* object.
- CRRN8: The file context can be transient or persistent depending on what was required by the Applet during the creation of the *FileView* object.
- CRRN9: Each FileView shall be given the access control privileges associated with the UICC File System or the corresponding ADF for the Applet.
- CRRN10: The access control privileges are checked each time a method of the *FileView* object is invoked. The access control privileges are defined by the access domain parameters specified in ETSI TS 102 226 [8].
- CRRN11: The root of the context of a *FileView* object is the MF for the UICC *FileView*.
- CRRN12: The root of the context of a *FileView* object is the ADF for an ADF *FileView*.
- CRRN13: When the transient context of a *FileView* is cleared, the current DF becomes the root of the *FileView*.

5.5.8.1.1.2 Parameter errors

No requirements.

5.5.8.1.1.3 Context errors

• CRRC1: It is not possible to access the MF or any DF or EF located under the MF from an ADF FileView.

5.5.8.1.2 Test area files

Test Source: Test_Cre_Ufa_View.java.

Test Applet: Cre_Ufa_View_1.java.

Cap File: Cre_ufa_view.cap.

5.5.8.1.3 Test coverage

CRR number	Test case number
CRRN1	1, 2, 3
CRRN2	1, 2, 3 and see also Api_1_Cont test cases for CRRN1
CRRN3	1, 2, 3 and see also Api_1_Cont test cases for CRRN1
CRRN4	2 and see also Api_1_Cont test cases for CRRN1
CRRN5	3 and see also Api_1_Cont test cases for CRRN1
CRRN6	4
CRRN7	5, 7 and see also Api_1_Cont test cases for CRRN1
CRRN8	6
CRRN9	See Cre_Tin_Acdo
CRRN10	See Cre_Tin_Acdo
CRRN11	5, 6
CRRN12	5, 6
CRRN13	6
CRRC1	3

5.5.8.1.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Applets can get a FileView	·	•
	1 A toolkit applot Applot1 and a re-		
	1- A toolkit applet, Applet1, and a non toolkit applet, Applet2, are installed		
	with full access to the file system		
	2 2		
	2- An envelope menu selection is sent to trigger Applet1	2- Applet1 is triggered	
	origger i-ppreer		
	3- Applet1 gets the UICC FileView using		
	<pre>method getUICCFileView() and the ADF1 FileView getTheFileView()</pre>	3- No exception is thrown	
	_		
	4- Send an APDU to trigger Applet2		
	5- Applet2 gets the UICC FileView using	4- Applet2 is triggered	
	method getUICCFileView() and the ADF1	1	
	FileView getTheFileView()	5- No exception is thrown	
2	Applets can only access all files under the MF		
-	using the UICC file view		
1	1- An envelope menu selection is sent to	1- Applet1 is triggered	
1	trigger Applet1 2- Applet1 gets the UICC FileView	0 No 2022 27 1 1	
	3- Applet1 selects the MF	3- No exception is thrown	
	4- Applet1 selects the EF _{DIR}	4- No exception is thrown5- No exception is thrown	
	5- Applet1 selects the DF _{TELECOM} 6- Applet1 selects the MF	6- No exception is thrown	
	7- Applet1 selects the DF_{TEST}	7- No exception is thrown	
	8- Applet1 selects the DF _{TEST1}	8- No exception is thrown	
	9- Applet1 selects the EF_{TAA} 10- Applet1 tries to select DF_{ADF1}	9- No exception is thrown	
	TAPPICET CITES CO SCIECC DIADRI	10- An exception is thrown	
	11- Send an APDU to trigger Applet2	11 Applet2 is triggered	
	12- Applet2 gets the UICC FileView 13- Applet2 selects the MF	11- Applet2 is triggered	
	14- Applet2 selects the EFDIR	13- No exception is thrown	
	15- Applet2 selects the DF _{TELECOM}	14- No exception is thrown	
	16- Applet2 selects the MF 17- Applet2 selects the DF _{TEST}	15- No exception is thrown	
	18- Applet2 selects the DF _{TEST1}	16- No exception is thrown	
	19- Applet2 selects the EF _{TAA}	17- No exception is thrown 18- No exception is thrown	
	20- Applet2 tries to select DF _{ADF1}	19- No exception is thrown	
		20- An exception is thrown	
3	Applets can access all files under the ADF1		
	using the ADF1 file view		
	1- An envelope menu selection is sent to	1- Applet1 is triggered	
1	trigger Applet1	Applett is triggered	
1	2- Applet1 gets the ADF1 FileView		
1	3- Applet1 selects the ADF1 4- Applet1 selects the DF _{TELECOM}	3- No exception is thrown	
	5- Applet1 selects the ADF1	4- No exception is thrown	
	6- Applet1 selects the DF _{TEST}	5- No exception is thrown	
	7- Applet1 selects the DF_{TEST1} 8- Applet1 selects the EF_{TAA}	6- No exception is thrown7- No exception is thrown	
1	9- Applet1 tries to select the MF	8- No exception is thrown	
1	10- Applet1 tries to select the EF _{DIR}	9- An exception is thrown	
1	11- Applet1 tries to select DF _{ADF2}	10- An exception is thrown	
1	12- Send an APDU to trigger Applet2	11- An exception is thrown	
1	13- Applet2 gets the ADF1 FileView	12 Applet2 is triangled	
1	14- Applet2 selects the ADF1 15- Applet2 selects the DF _{TELECOM}	12- Applet2 is triggered	
	16- Applet2 selects the ADF1	14- No exception is thrown	
	17- Applet2 selects the $\mathrm{DF}_{\mathrm{TEST}}$	15- No exception is thrown	
	18- Applet2 selects the DF _{TEST1} 19- Applet2 selects the EF _{TAA}	16- No exception is thrown	
	20- Applet1 tries to select the MF	17- No exception is thrown	
1	21- Applet1 tries to select the $\mathrm{EF}_{\mathrm{DIR}}$	18- No exception is thrown	
1	22- Applet2 tries to select DF _{ADF2}	19- No exception is thrown	
L	<u> </u>	1	I .

ld	Description	API/CAT RE Expectation	APDU Expectation
	_	20- An exception is thrown	-
		21- An exception is thrown	
		22- An exception is thrown	
4	FileView object shall be provided as a		
	permanent JCRE entry point object		
	1- An envelope menu selection is sent to	4. Applet4 is triangled	
	trigger Applet1	1- Applet1 is triggered	
	2- Applet1 gets an UICC FileView in a	2- No exception is thrown	
	static field	3- No exception is thrown	
	3- Applet1 gets an ADF1 <i>FileView</i> in a static field	4- No exception is thrown	
	4- Applet1 gets an UICC FileView in a	·	
	field of the toolkit applet	5- No exception is thrown	
	5- Applet1 gets an ADF1 FileView in a		
	field of the toolkit applet		
	6- Send an APDU to trigger Applet2	6- Applet2 is triggered	
	7- Applet2 gets an UICC FileView in a	7- No exception is thrown	
	static field	8- No exception is thrown	
	8- Applet2 gets an ADF1 <i>FileView</i> in a static field	9- No exception is thrown	
	9- Applet2 gets an UICC FileView in a		
	field of the toolkit applet	10- No exception is thrown	
	10- Applet2 gets an ADF1 <i>FileView</i> in a field of the toolkit applet		
5	Context independence on FileView object		
	Comox macponacines on the tion object		
	The following sequence shall be performed		
	twice, once with the UICC FileView, then		
	once with the ADF1 FileView		
	1- An envelope menu selection is sent to		
	trigger Applet1	1- Applet1 is triggered	
	2- Applet1 gets 2 UICC(or ADF1) FileView and stores them in objects FileView1 and		
	FileView2	2- No exception is thrown	
	3- Applet1 selects DF_{TEST}/EF_{CARU} using the		
	FileView1 object	0. N	
	4- Applet1 calls the readRecord() method in the NEXT mode using the FileView1	3- No exception is thrown	
	object	4- The record value is "55 55 55"	
	5- Applet1 calls the readRecord() method	The record value is 33 33 33	
	in the NEXT mode using the FileView1	5- The record value is "AA AA AA"	
	object 6- Applet1 calls the readRecord() method		
	in the NEXT mode using the FileView2	6- An exception is thrown	
	object		
	7- Applet1 selects EF _{LARU} using the FileView2 object	7- An exception is thrown	
	8- Applet1 selects DF _{test} using the	O. No evention is the	
	FileView2 object	8- No exception is thrown	
	9- Applet1 selects EF _{CARU} using the	9- No exception is thrown	
	FileView2 object 10- Applet1 calls the readRecord() method	140 CACOPHOIT IS HITOWIT	
	in the NEXT mode using the FileView2	10- The record value is "55 55 55"	
	object		
	The game test seguence is done weight		
	The same test sequence is done using the non toolkit applet Applet2		
Ь	Inch coothie apprec inprices		

ld	Description	API/CAT RE Expectation	APDU Expectation
6	File Context can be transient or persistent		
	The following sequence shall be performed twice, once with the UICC FileView, then once with the ADF1 FileView		
	1- An envelope menu selection is sent to trigger Applet1	1- Applet1 is triggered	
	2- Applet1 gets 2 UICC(or ADF1) FileViewand stores one in a transient object FileView1 and the other in a	2- No exception is thrown	
	persistent object FileView2 3- Applet1 selects DF _{TEST} /EF _{CARU} using the FileView1 object then the FileView2 object	3- No exception is thrown	
	4- Applet1 calls the readRecord() method in the NEXT mode using the FileView1 object then the FileView2 object 5- Reset the card	4- The record value is "55 55 55"	
	6- An envelope menu selection is sent to trigger Applet1	6- Applet1 is triggered	
	7- Applet1 calls the status() command using the FileView1 8- Applet1 calls the status() command	7- The current DF is DF _{TEST}	
	using the FileView2 9- Applet1 calls the readRecord() method in the NEXT mode using the FileView2 10- Applet1 calls the readRecord() method	8- The current DF is the root (MF or ADF1) 9- The record value is "AA AA AA"	
	in the NEXT mode using the FileView1	10- An exception is thrown	
7	File Context integrity 1- An envelope menu selection is sent to	1- Applet1 is triggered	
	trigger Applet1 2- Applet1 gets a UICC FileView and selects DF _{TEST} , with it	2- No exception is thrown	
	3- Applet1 sends a Display Text proactive command	3- SW = 91 XX	
	4- Send a fetch command 5- An envelope call control by NAA is sent 6- Applet1 selects DF _{TEST} /DF _{TEST1} , using the previous UICC <i>FileView</i> , then finalizes	4- Display Text is fetched5- Applet1 is triggered6- No exception is thrown	
	7- Send terminal response of Display Text command 8- Applet1 resumes and calls status()	7- SW = 90 00	
	command, using the same UICC FileView	8- The current DF is DF _{TEST1}	

5.5.8.2 File Access

Test Area Reference: Cre_Ufa_Facc.

Shall be covered in the API access part.

5.5.9 Other parts transferred to framework from API

5.5.9.1 A handler is a temporary JCRE Entry Point object

Test Area Reference: Cre_Api_Hepo.

5.5.9.1.1 Conformance requirement

5.5.9.1.1.1 Normal execution

- CRRN1: The EnvelopeHandler is a Temporary JCRE Entry Point Object (see Javacard 2.2.1 Runtime Environment (JCRE) Specification [2]).
- CRRN2: The EnvelopeResponseHandler is a Temporary JCRE Entry Point Object (see Javacard 2.2.1 Runtime Environment (JCRE) Specification [2]).

- CRRN3: The ProactiveHandler is a Temporary JCRE Entry Point Object (see Javacard 2.2.1 Runtime Environment (JCRE) Specification [2]).
- CRRN4: The ProactiveResponseHandler is a Temporary JCRE Entry Point Object (see Javacard 2.2.1 Runtime Environment (JCRE) Specification [2]).

5.5.9.1.1.2 Parameter errors

No requirements.

5.5.9.1.1.3 Context errors

No requirements.

5.5.9.1.2 Test area files

Test Source: Test_Cre_Api_Hepo.java.

Test Applet: Cre_Api_Hepo_1.java.

Cap File: Cre_api_hepo.cap.

5.5.9.1.3 Test coverage

CRR number	Test case number
CRRN1	1, 2
CRRN2	3, 4
CRRN3	5, 6
CRRN4	7, 8

5.5.9.1.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	EnvelopeHandlerSystem.getTheHandler()		-
	Store it in a static field of the toolkit applet	SecurityException is thrown	
2	EnvelopeHandlerSystem.getTheHandler()		
	Store it in a field of the toolkit applet	SecurityException is thrown	
3	EnvelopeResponseHandlerSystem.getTheHan dler()		
	Store it in a static field of the toolkit applet	SecurityException is thrown	
4	EnvelopeResponseHandlerSystem.getTheHan dler()	SecurityException is thrown	
5	Store it in a field of the toolkit applet		
Э	ProactiveHandlerSystem.getTheHandler()		
	Store it in a static field of the toolkit applet	SecurityException is thrown	
6	ProactiveHandlerSystem.getTheHandler()		
	Store it in a field of the toolkit applet	SecurityException is thrown	
7	Build and send a Display Text command to be able to get the reference of the ProactiveReponseHandler		Proactive command is fetched and terminal response is issued
	ProactiveResponseHandlerSystem.getTheHan dler()		
	Store it in a static field of the toolkit applet	SecurityException is thrown	

ld	Description	API/CAT RE Expectation	APDU Expectation
8	ProactiveResponseHandlerSystem.getTheHan		
	dler()		
	Store it in a field of the toolkit applet	SecurityException is thrown	

5.5.9.2 Transaction

Test Area Reference: Cre_Api_Tran.

5.5.9.2.1 Conformance requirement

5.5.9.2.1.1 Normal execution

- CRRN1: A pending toolkit applet transaction at the ProactiveHandler.send() method invocation is aborted.
- CRRN2: A pending toolkit applet transaction is aborted on the termination of the toolkit applet (return from the *processToolkit()* method).
- CRRN3: At the invocation of the *processToolkit()* method there shall be no transaction in progress.

5.5.9.2.1.2 Parameter errors

No requirements.

5.5.9.2.1.3 Context errors

No requirements.

5.5.9.2.2 Test area files

Test Source: Test_Cre_Api_Tran.java.

Test Applet: Cre_Api_Tran_1.java.

 $Cre_Api_Tran_2.java.$

Cap File: Cre_api_tran.cap.

5.5.9.2.3 Test coverage

CRR number	Test case number
CRRN1	1
CRRN2	2
CRRN3	Not testable

5.5.9.2.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Verify that transaction is aborted when a proactive command is sent		
	1- Applet1 is triggered and performed the following sequence - Initialize a byte field with 0x05 - Build a display text proactive command - beginTransaction() - Update the byte with 0x02 - send the proactive command		
	3- Applet is resumed- Verify that the byte value is 0x05- JCSystem.getTransactionDepth()	JCSystem.getTransactionDepth() shall return 0	2- Proactive command fetched and terminal response is issued
2	Verify that transaction is aborted when a		
	proactive command is sent		
	1- Applet2 is triggered and send a display text proactive command Applet1 is triggered and performed the following sequence - Initialize a static byte field with 0x05 - beginTransaction() - Update the byte with 0x02 - Finalize		
	<pre>3- Applet2 is resumed and - Verify that the byte value is 0x05 - JCSystem.getTransactionDepth()</pre>	JCSystem.getTransactionDepth() shall return 0	2- SW = 91 XX Proactive command fetched and terminal response is issued

5.5.9.3 Timer Id between Applets

Test Area Reference: Cre_Api_Tmid.

5.5.9.3.1 Conformance requirement

5.5.9.3.1.1 Normal execution

No requirements.

5.5.9.3.1.2 Parameter errors

No requirements.

5.5.9.3.1.3 Context errors

• CRRC1: The method ToolkitRegistry.releaseTimer() shall throw a ToolkitException with INVALID_TIMER_ID reason if the timer is valid but is not allocated to this applet.

5.5.9.3.2 Test area files

Test Source: Test_Cre_Api_Tmid.java.

Test Applet: Cre_Api_Tmid_1.java.

Cap File: Cre_api_tmid.cap.

5.5.9.3.3 Test coverage

CRR number	Test case number	
CRRC1	1	

5.5.9.3.4 Test procedure

ld	Description	API/CAT RE 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.		
	Trigger second instance and try to call releaseTimer() method with the static field value.	releaseTimer() method call shall throw a ToolkitException with INVALID TIMER ID reason	

5.5.10 Registration

5.5.10.1 Event registration

Test Area Reference: Cre_Reg_Evtr.

5.5.10.1.1 Conformance requirement

5.5.10.1.1.1 Normal execution

- CRRN1: A Toolkit Applet can change its registration to toolkit events during its whole life cycle.
- CRRN2: The registration of a Toolkit Applet to an event shall not be affected by its life cycle state.
- CRRN3: The *getShareableInterfaceObject()* has to be called before the applet is triggered the first time.
- CRRN4: The byte parameter of *getShareableInterfaceObject()* method has to be set to '01'.
- CRRN5: The AID parameter of the *getShareableInterfaceObject()* method shall be set to null.

5.5.10.1.1.2 Parameter errors

No requirements.

5.5.10.1.1.3 Context errors

No requirements.

5.5.10.1.2 Test area files

Test Source: Test_Cre_Reg_Evtr.java.

Test Applet: Cre_Reg_Evtr_1.java.

Cre_Reg_Evtr_2.java.

Cap File: Cre_reg_evtr.cap.

5.5.10.1.3 Test coverage

CRR number	Test case number	
CRRN1	1 but partially tested	
CRRN2	1,	
	and see also	
	CRRN9 of Cre_Pcs_Spco	
	and	
	CRRN3 of Cre_Apt_Eccn	
CRRN3	2	
CRRN4	2	
CRRN5	2	

5.5.10.1.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Toolkit applet can change its registration during its whole life cycle		
	1- Install Applet1 to let it in the INSTALL state During its install() method, Applet1 registers to EVENT_EVENT_DOWNLOAD_USER_ACTIVITY and EVENT_EVENT_DOWNLOAD_MT_CALL		2- Set Up Event List
	2- Make selectable Applet1 3- An envelope Event Download User Activity is sent to trigger Applet1	3- Applet1 is triggered	proactive command is fetched with User Activity and MT Call events
	4- Applet1 registers to EVENT_EVENT_DOWNLOAD_LOCATION_STATUS and deregisters to EVENT_EVENT_DOWNLOAD_USER_ACTIVITY		4- Set Up Event List proactive command is fetched with Location Status and MT Call events
2	getShareableInterfaceObject() has to be called before the first triggering		
	1- Install of Applet2 Applet2 getShareableInterfaceObject() method increments a counter		
	2- Trigger Applet2	2- Applet2 performs the following checks: - the counter is incremented - byte parameter of getShareableInterfaceObject() method is set to '01' - AID parameter getShareableInterfaceObject() method is null	

5.5.11 UICC Toolkit Applet

5.5.11.1 Data and function sharing

Test Area Reference: Cre_Uta_Dafs.

5.5.11.1.1 Conformance requirement

The sharing mechanism defined in "Java CardTM 2.2.1 Application Programming Interface Specification" ([1]) and "Java CardTM 2.2.1 Runtime Environment Specification" ([2]) shall be used by the Toolkit Applet(s) to share data and function.

5.5.11.1.1.1 Normal execution

- CRRN1:The interface shall extend the javacard.framework.shareable interface.
- CRRN2: The server Applet shall overwrite the Applet.getShareableInterfaceObject() method.
- CRRN3: The client Applet shall use the JCSystem.getAppletShareableInterfaceObject() to retrieve a reference to the server Applet shareable interface.
- CRRN4: When the client Applet calls JCSystem.getAppletShareableInterfaceObject() method the Applet.getShareableInterfaceObject() method of the server Applet is called by the CAT RE.

5.5.11.1.1.2 Parameter errors

No requirements.

5.5.11.1.3 Context errors

No requirements.

5.5.11.1.2 Test area files

This clause uses 2 packages:

uicc.test.catre.cre_uta_dafs.cre_uta_dafs_a

uicc.test.catre.cre_uta_dafs.cre_uta_dafs_b

Test Source: Test_Cre_Uta_Dafs.java.

Test Applet: Cre_Uta_Dafs_A_1.java (server applet).

Cre_Uta_Dafs_A_2.java (server interface).

Cre_Uta_Dafs_A_3.java (class).

Cre_Uta_Dafs_B_1.java (client applet).

Cap File: Cre_uta_dafs_a.cap.

Cre_uta_dafs_b.cap.

5.5.11.1.3 Test coverage

CRR number	Test case number
CRRN1	1
CRRN2	1
CRRN3	1
CRRN4	1

5.5.11.1.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
0	1- Install packages PackageA then PackageB		
	2- Install AppletA1 and AppletB1		
	11 11		
1	Use of a shareable interface		
	1- Send an envelope Menu Selection to trigger AppletA1 (Menu Id = 01)	1- AppletA1 is triggered	
	2- AppletA1 stores the menu Id		
	3- Send an envelope Menu Selection to trigger AppletB1	3- AppletB1 is triggered	
	4- AppletB1 uses the shareable interface of AppletA1 to retrieve the Menu Id that was used to trigger AppletA1 previously	4- Menu Id retrieved shall be 01	

5.5.11.2 Package deletion

Test Area Reference: Cre_Uta_Pdel.

5.5.11.2.1 Conformance requirement

The Package deletion mechanism defined in "Java Card $^{\text{TM}}$ 2.2.1 Runtime Environment Specification" ([2]) shall be used to delete the content from the UICC.

5.5.11.2.1.1 Normal execution

- CRRN1: If the applet/library package is resident in mutable memory, then the Java Card RE shall delete the applet/library package.
- CRRN2: Following a successful applet/library package deletion, it shall not be possible to install another package which depends on the deleted package.

5.5.11.2.1.2 Parameter errors

No requirements.

5.5.11.2.1.3 Context errors

- CRRC1: The deletion shall fail if a reachable (non-garbage) instance of a class belonging to the package being deleted exists on the card.
- CRRC2: The deletion shall fail if another package on the card depends on this package (as expressed in the CAP file's import component).

5.5.11.2.2 Test area files

This clause uses 2 packages:

uicc.test.catre.cre_uta_pdel.cre_uta_pdel_a

uicc.test.catre.cre_uta_pdel.cre_uta_pdel_b (depends on uicc.test.catre.cre_uta_pdel.cre_uta_pdel_a)

Test Source: Test_Cre_Uta_Pdel.java.

Test Applet: Cre_Uta_Pdel_A_1.java.

Cre_Uta_Pdel_A_2.java.

Cre_Uta_Pdel_A_3.java (server interface) Cre_Uta_Pdel_B_1.java (use class Cre_Uta_Pdel_A_2).

 $Cre_Uta_Pdel_B_2.java.$

Cap File: Cre_uta_pdel_a.cap.

 $Cre_uta_pdel_b.cap.$

5.5.11.2.3 Test coverage

CRR number	Test case number
CRRN1	1 to 5
CRRN2	3
CRRC1	1
CRRC2	2

5.5.11.2.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
0	1- Install packages PackageA then PackageB		
	2- Install AppletB1		
1	The package deletion is unsuccessful if a		
	reachable instance of a class belonging to the		
	package exists on the card		
	1- Delete PackageB		1- SW shall be different
	2- Install AppletB2		from 90 00 2- RAPDU = 00 90 00
	3- Delete AppletB1 and AppletB2		
2	The package deletion is unsuccessful if		
	another package on the card depends on this		
	package		
	1- Delete PackageA		1- SW shall be different from 90 0
	2- Install AppletA1		02- RAPDU = 00 90 00
	3- Delete AppletA1		
3	The installation of a package which depends on a deleted package shall fail		
	1- Delete PackageB		1- SW = 90 00
	2- Delete PackageA		2- SW = 90 00
	3- Install PackageB		3- SW shall be different from 90 00
4	Once a package is deleted, it shall not be possible to install an applet from this package		
	1- Install AppletA1		1- SW = SW shall be different from 90 00
	2- Install AppletB2		different from 90 00
			2- SW = SW shall be different from 90 00
5	This test checks that it is possible to re-install		
	the same package		
	1- Install PackageA		2- RAPDU = 00 90 00
	2- Install AppletA1		

5.5.11.3 Applet deletion

 $Test\ Area\ Reference:\ Cre_Uta_Adel.$

5.5.11.3.1 Conformance requirement

The Applet deletion mechanism defined in "Java CardTM 2.2.1 Runtime Environment Specification" ([2]) shall be used to delete the content from the UICC.

5.5.11.3.1.1 Normal execution

- CRRN1: Following a successful applet instance deletion, the Java Card RE shall delete the applet instance.
- CRRN2: Following an unsuccessful applet instance deletion, the applet instance shall be selectable, and all objects owned by the applet shall remain unchanged.
- CRRN3: Following a successful applet instance deletion, it shall not be possible to select that applet, and no
 object owned by the applet can be accessed by any applet currently on the card or by a new applet created in
 the future.

5.5.11.3.1.2 Parameter errors

No requirements.

5.5.11.3.1.3 Context errors

- CRRC1: The deletion shall fail if any object owned by the applet instance is referenced from an object owned by another applet instance on the card.
- CRRC2: The deletion shall fail if any object owned by the applet instance is referenced from a static field on any package on the card.
- CRRC3: The deletion shall fail if an applet instance, belonging to the context of the applet instance being deleted, is active (selected) on the card.

5.5.11.3.2 Test area files

This clause uses 2 packages:

uicc.test.catre.cre_uta_adel.cre_uta_adel_a

uicc.test.catre.cre_uta_adel.cre_uta_adel_b

Test Source: Test_Cre_Uta_Adel.java.

Test Applet: Cre_Uta_Adel_A_1.java.

Cre_Uta_Adel_A_2.java.

 $Cre_Uta_Adel_A_3.java.$

Cre_Uta_Adel_B_1.java.

Cre_Uta_Adel_B_2. java.

Cap File: Cre_uta_adel_a.cap.

Cre_uta_adel_b.cap.

5.5.11.3.3 Test coverage

CRR number	Test case number	
CRRN1	3, 4	
CRRN2	1, 2, 3	
CRRN3	4, 5	
CRRC1	1	
CRRC2	2	
CRRC3	3	

5.5.11.2.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
0	1- Install packages PackageA then PackageB		
	2- Install AppletA1, AppletA2, AppletB1 and AppletB2		
1	The deletion shall fail if any object owned by the applet instance is referenced from an object owned by another applet instance on the card		
	1- Send an envelope Menu Selection to trigger AppletA1	1- AppletA1 is triggered	
	2- AppletA1 store the menu Id		
	3- Send an envelope Menu Selection to trigger AppletA2	3- AppletA2 is triggered	
	4- AppletA2 gets a reference to the shareable interface to retrieve the menu Id used to trigger AppletA1		
	5- Delete AppletA1		5- SW shall be different
	6- Send an envelope Menu Selection to trigger AppletA1	6- AppletA1 is triggered	from 90 00
	7- Send an envelope Menu Selection to trigger AppletA2	7- AppletA2 is triggered	7- SW = 90 00
	8- AppletA2 frees the reference to the shareable interface		
	9- Delete AppletA1		0.00
	10- Install AppletA1		9- SW = 90 00
	11- Send an envelope Menu Selection to trigger AppletA1	11- AppletA1 is triggered	10- RAPDU = 00 90 00
	12- AppletA1 store the menu Id 13- Send an envelope Menu Selection to trigger AppletB2	13- AppletB2 is triggered	
	14- AppletB2 gets a reference to the shareable interface to retrieve the menu Id used to trigger AppletA1 15- Delete AppletA1		15- SW shall be different
	16- Send an envelope Menu Selection to trigger AppletA1	16- AppletA1 is triggered	from 90 00
	17- Send an envelope Menu Selection to trigger AppletB2	17- AppletB2 is triggered	17- SW = 90 00
	18- AppletB2 frees reference to the shareable interface		
	19- Delete AppletA1		
	20- Install AppletA1		19- SW = 90 00
			20- RAPDU = 00 90 00

ld	Description	API/CAT RE Expectation	APDU Expectation
2	The deletion shall failed if any object owned by the applet instance is referenced from a static field on any package on the card		
	1- Send an envelope Menu Selection to trigger AppletA1	1- AppletA1 is triggered	
	2- AppletA1 store the menu Id 3- Send an envelope Menu Selection to trigger AppletA2		
	4- AppletA2 gets a reference to the shareable interface and stores it in a static field of PackageA, then retrieves the menu Id used to trigger AppletA1 5- Delete AppletA2	3- AppletA2 is triggered	5- SW = 90 00
	6- Delete AppletA1		6- SW shall be different from 90 00
	7- Send an envelope Menu Selection to trigger AppletA1	7- AppletA1 is triggered	110111 90 00
	8- AppletA1 frees the reference to the shareable interface		
	9- Delete AppletA1		9- SW = 90 00
	10- Install AppletA1		10- RAPDU = 00 90 00
	11- Send an envelope Menu Selection to trigger AppletA1	11- AppletA1 is triggered	10- NAI DO = 00 90 00
	12- AppletA1 store the menu Id 13- Send an envelope Menu Selection to trigger AppletB2	13- AppletB2 is triggered	
	14- AppletB2 gets a reference to the shareable interface and stores it in a static field of PackageB, then retrieves the menu Id used to trigger AppletA1 15- Delete AppletB2		
	16- Delete AppletA1		15- SW = 90 00
	17- Send an envelope Menu Selection to trigger AppletA1	17- AppletA1 is triggered	16- SW shall be different from 90 00
	18- Send an envelope Menu Selection to trigger AppletB1	18- AppletB1 is triggered	
	19- AppletB1 then frees the reference to the shareable interface		
	20- Delete AppletA1		00.00
	21- Install AppletA1		20- SW = 90 00
3	Deletion of an active applet instance		21- RAPDU = 00 90 00
	1- Delete AppletB1		1- SW = 90 00
	2- Install AppletB1		
	3- Open another channel and select		2- RAPDU = 00 90 00
	AppletB1 the new open channel		3- RAPDU = <applet data="" selected=""> 90 00</applet>
	4- Delete AppletB1 on channel 0		4- SW shall be different
	5- Select AppletB1 on Channel 0		from 90 00
	6- Reset		5- RAPDU = <applet data="" selected=""> 90 00</applet>

ld	Description	API/CAT RE Expectation	APDU Expectation
4	Selection of a deleted applet instance		
	1- Delete AppletB1		1- SW = 90 00
	2- Select AppletB1 on Channel 0		2- SW shall be different
	3- Install AppletB1		from 90 00
			3- RAPDU = 00 90 00
5	Object owned by a deleted applet can't be accessed by other applets		
	1- Delete AppletA1		1- SW = 90 00
	2- Send an envelope Menu Selection to trigger AppletB1	2- AppletB1 is triggered	
	3- AppletB1 gets a reference to the shareable interface to retrieve the menu Id used to trigger AppletA1	3- An exception is thrown	

5.5.11.4 Object deletion

Test Area Reference: Cre_Uta_Odel.

5.5.11.4.1 Conformance requirement

5.5.11.4.1.1 Normal execution

• CRRN1: If an object deletion mechanism is supported then the one defined in "Java CardTM 2.2.1 Application Programming Interface Specification" ([1]) shall be used.

5.5.11.4.1.2 Parameter errors

No requirements.

5.5.11.4.1.3 Context errors

No requirements.

5.5.11.4.2 Test area files

Test Script: Test_Cre_Uta_Odel.java

Test Applet: Cre_Uta_Odel_1.java

Cap File: Cre_uta_odel.cap

5.5.11.4.3 Test coverage

CRR number	Test case number
CRRN1	1

5.5.11.4.4 Test procedure

ld	Description	API/CAT RE Expectation	APDU Expectation
1	Object deletion		
	1- Applet calls JCSystem.isObjectDeletionSupported()	2- Returns TRUE	

5.5.12 Proactive Command Handling

5.5.12.1 General behaviour

Test Area Reference: Cre_Pch_Genb.

5.5.12.1.1 Conformance requirement

5.5.12.1.1.1 Normal execution

- CRRN1: On the call to the *send()* method, the CAT Runtime Environment shall handle the transmission of the proactive command to the terminal, and the reception of the response.
- CRRN2: The CAT Runtime Environment shall resume the Toolkit Applet execution on the return from the *send()* method.

5.5.12.1.1.2 Parameter errors

No requirements.

5.5.12.1.1.3 Context errors

No requirements.

5.5.12.1.2 Test area files

None.

5.5.12.1.3 Test coverage

CRR number	Test case number	
CRRN1	See test case 2 of	
	Cre_Hin_Prhd	

5.5.12.1.4 Test procedure

None.

5.5.13 CAT Runtime Environment behaviour

5.5.13.1 Context

Test Area Reference: Cre_Cat_Ctxt.

5.5.13.1.1 Conformance requirement

5.5.13.1.1.1 Normal execution

- CRRN1: At the invocation of the *processToolkit()* method the context as defined in Java Card shall be set to the context of the Toolkit Applet. The previous context (context of the caller) shall be the context of the CAT Runtime Environment.
- CRRN2: During the execution there might be other context switches, but at the return of the *send()* method the toolkit applet context is restored.

5.5.13.1.1.2 Parameter errors

No requirements.

5.5.13.1.1.3 Context errors

No requirements.

5.5.13.1.2 Test area files

Test Source: Test_Cre_Cat_Ctxt.java.

Test Applet: Cre_Cat_Ctxt_1.java.

Cap File: Cre_cat_ctxt.cap.

5.5.13.1.3 Test coverage

CRR number	Test case number	
CRRN1	Not Testable	
CRRN2	see Cre_Hin_Enhd	

5.5.13.1.4 Test procedure

Not applicable.

5.5.14 UICC and ADF File System Administration API

5.5.14.1 AdminFile View

Test Area Reference: Cre_Fsa_View

5.5.14.1.1 Conformance requirement

5.5.14.1.1.1 Normal execution

- CRRN1: AdminFileView objects follow the behaviour of FileView objects and inherit FileView functionality.
- CRRN2: An *AdminFileView* object can be retrieved by invoking one of the *getAdminFileView()* methods defined in the AdminFileViewBuilder class.
- CRRN3: Each *AdminFileView* shall be given the access control privileges associated with the UICC or the corresponding ADF for the Applet.
- CRRN4: The access control privileges are checked against the access rules defined in ETSI TS 102 221 [5] each time a method of the *AdminFileView* object is invoked.

5.5.14.1.1.2 Parameter errors

No requirements.

5.5.14.1.1.3 Context errors

No requirements.

5.5.14.1.2 Test area files

None.

5.5.14.1.3 Test coverage

CRR number	Test case number	
CRRN1	See API_4_Afv_xxxx	
CRRN2	See API_4_Afb_xxxx	
CRRN3	See Cre_Tin_Acdo	
CRRN4	See Cre_Tin_Acdo	

5.5.14.1.4 Test procedure

None.

5.5.14.2 AdminFile Access

Test Area Reference: Cre_Fsa_Aacc.

See API access.administration part.

Annex A (normative): Class and methods acronyms

A.1 uicc.access package

Interface / Class Name	Acronyms
FileView	F∨w
UICCConstants	Uct
UICCSystem	Usy
UICCException	Uex

A.1.1 FileView methods

Method Name	Acronyms
<pre>public void activateFile()</pre>	Actf
<pre>public void deactivateFile()</pre>	Dacf
<pre>public short increase(byte[] incr, short incrOffset, short incrLength, byte[] resp, short respOffset)</pre>	Incr
<pre>public short readBinary(short fileOffset, byte[] resp, short respOffset, short respLength)</pre>	Redb
<pre>public short readRecord(short recNumber, byte mode, short recOffset, byte[] resp, short respOffset, short respLength)</pre>	Redr
<pre>public short searchRecord(byte mode, short recordNum, short searchIndication, byte[] patt, short pattOffset, short pattLength, short[] response, short respOffset, short respLength)</pre>	Sear
public void select(byte sfi)	Slctb
public void select(short fid)	Slcts
<pre>public short select(short fid, byte[] fcp, short fcpOffset, short fcpLength)</pre>	Slct_Bss
<pre>public short status(byte[] fcp, short fcpOffset, short fcpLength)</pre>	Stat
<pre>public void updateBinary(short fileOffset, byte[] data, short dataOffset, short dataLength)</pre>	Updb
<pre>public void updateRecord(short recNumber, byte mode, short recOffset, byte[] data, short dataOffset, short dataLength)</pre>	Updr

A.1.2 UICCConstants

Method Name	Acronyms
Constants	Cnst

A.1.3 UICCSystem methods

Method Name	Acronyms
public static FileView	Getfob
<pre>getTheFileView(javacard.framework.AID aid,</pre>	
byte event)	
<pre>public static FileView getTheFileView(byte[] buffer,</pre>	Getf_Bsbb
short bOffset, byte bLength, byte event)	_
<pre>public static FileView getTheUICCView(byte event)</pre>	Getfb

A.1.4 UICCException methods

Method Name	Acronyms
public UICCException(short reason)	Coor
public static void throwIt(short reason)	Thit
Constants	Cons

A.2 uicc.toolkit package

BERTLVEditHandler	Bte
	- 1.2
BERTLVViewHandler	Btv
EditHandler	Edh
EnvelopeHandler	Enh
EnvelopeResponseHandler	Erh
ProactiveHandler	Pah
ProactiveResponseHandler	Prh
ToolkitConstants	Tkc
ToolkitInterface	Tki
ToolkitRegistry	Tkr
ViewHandler	Vwh
EnvelopeHandlerSystem	Ehs
EnvelopeResponseHandlerSystem	Ers
ProactiveHandlerSystem	Phs
ProactiveResponseHandlerSystem	Prs
TerminalProfile	Tep
ToolkitRegistrySystem	Trs
ToolkitException	Tke

A.2.1 BERTLVEditHandler methods

Method Name	Acronyms
public void setTag(byte bBERTag)	Sttg
Inherited method name: EditHandler	
<pre>void appendArray(byte[] buffer, short offset, short length)</pre>	Apda
void appendTLV(byte tag, byte value)	Aptlbb
<pre>void appendTLV(byte tag, byte[] value, short valueOffset, short valueLength)</pre>	Aptlb_Bss
<pre>void appendTLV(byte tag, byte[] value1, short value1Offset, short value1Length, byte[] value2, short value2Offset, short value2Length)</pre>	Aptlb_Bss_Bss
void appendTLV(byte tag, byte value1, byte value2)	Aptlbbb
<pre>void appendTLV(byte tag, byte value1, byte[] value2, short value2Offset, short value2Length)</pre>	Aptlbb_Bss
void appendTLV(byte tag, byte value1, short value2)	Aptlbbs
void appendTLV(byte tag, short value)	Aptlbs
<pre>void appendTLV(byte tag, short value1, short value2)</pre>	Aptlbss
void clear()	Cler
Inherited method name: ViewHandler	
byte compareValue(short valueOffset, byte[] compareBuffer, short compareOffset, short compareLength)	Cprv
<pre>short copy(byte[] dstBuffer, short dstOffset, short dstLength)</pre>	Сору
<pre>short copyValue(short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength)</pre>	Сруv
<pre>byte findAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset)</pre>	Facrb_Bs

Method Name	Acronyms
byte findAndCompareValue(byte tag, byte occurence,	Facrbbs_Bss
short valueOffset, byte[] compareBuffer, short	
compareOffset, short compareLength)	
short findAndCopyValue(byte tag, byte[] dstBuffer,	Facyb_Bs
short dstOffset)	-
short findAndCopyValue(byte tag, byte occurence,	Facybbs_Bss
short valueOffset, byte[] dstBuffer, short	•
dstOffset, short dstLength)	
byte findTLV(byte tag, byte occurrence)	Find
short getCapacity()	Gcap
short getLength()	Glen
byte getValueByte(short valueOffset)	Gvby
short getValueLength()	Gvle
short getValueShort(short valueOffset)	Gvsh
Inherited method name: BERTLVViewHandler	
short getSize()	Gtsz
byte getTag()	Gttg

A.2.2 BERTLVViewHandler methods

Tests are done in inheriting interfaces BERTLVEditHandler and envelopeHandler.

A.2.3 EditHandler methods

 $Tests\ are\ done\ in\ inheriting\ interfaces\ Envelope Response Handler\ and\ Proactive Handler.$

A.2.4 EnvelopeHandler methods

Method Name	Acronyms
Byte getChannelIdentifier()	Gcid
Short getChannelStatus(byte channelIdentifier)	Gcst
Byte getItemIdentifier()	Giid
Inherited method name: BERTLVViewHandler	
short getSize()	Gtsz
byte getTag()	Gttg
Inherited method name: ViewHandler	
byte compareValue(short valueOffset, byte[] compareBuffer, short compareOffset, short compareLength)	Cprv
<pre>short copy(byte[] dstBuffer, short dstOffset, short dstLength)</pre>	Сору
<pre>short copyValue(short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength)</pre>	Сруv
byte findAndCompareValue(byte tag, byte[] compareBuffer, short compareOffset)	Facrb_Bs
<pre>byte findAndCompareValue(byte tag, byte occurence, short valueOffset, byte[] compareBuffer, short compareOffset, short compareLength)</pre>	Facrbbs_Bss
<pre>short findAndCopyValue(byte tag, byte[] dstBuffer, short dstOffset)</pre>	Facyb_Bs
<pre>short findAndCopyValue(byte tag, byte occurence, short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength)</pre>	Facybbs_Bss
byte findTLV(byte tag, byte occurrence)	Find
short getCapacity()	Gcap
short getLength()	Glen
byte getValueByte(short valueOffset)	Gvby
short getValueLength()	Gvle
short getValueShort(short valueOffset)	Gvsh

A.2.5 EnvelopeResponseHandler methods

Method Name	Acronyms
void post(boolean value)	Post
void postAsBERTLV(boolean value, byte tag)	Pabt
Inherited method name: EditHandler	
<pre>void appendArray(byte[] buffer, short offset, short</pre>	Apda
length)	
void appendTLV(byte tag, byte value)	Aptlbb
<pre>void appendTLV(byte tag, byte[] value, short</pre>	Aptlb_Bss
valueOffset, short valueLength)	
void appendTLV(byte tag, byte[] value1, short	Aptlb_Bss_Bss
value1Offset, short value1Length, byte[] value2,	
short value2Offset, short value2Length)	A 411- 1- 1-
void appendTLV(byte tag, byte value1, byte value2)	Aptlbbb
<pre>void appendTLV(byte tag, byte value1, byte[] value2, short value2Offset, short value2Length)</pre>	Aptlbb_Bss
void appendTLV(byte tag, byte value1, short value2)	Antibbo
	Aptlbbs
void appendTLV(byte tag, short value)	Aptlbs
void appendTLV(byte tag, short value1, short value2)	Aptlbss
void clear()	Cler
Inherited method name: ViewHandler	
byte compareValue(short valueOffset, byte[]	Cprv
compareBuffer, short compareOffset, short	·
compareLength)	
short copy(byte[] dstBuffer, short dstOffset, short	Сору
dstLength)	
short copyValue(short valueOffset, byte[] dstBuffer,	Сруv
<pre>short dstOffset, short dstLength) byte findAndCompareValue(byte tag, byte[]</pre>	F
compareBuffer, short compareOffset)	Facrb_Bs
byte findAndCompareValue(byte tag, byte occurence,	Facrbbs Bss
short valueOffset, byte[] compareBuffer, short	FACIDOS_DSS
compareOffset, short compareLength)	
short findAndCopyValue(byte tag, byte[] dstBuffer,	Facyb_Bs
short dstOffset)	r doyb_be
short findAndCopyValue(byte tag, byte occurence,	Facybbs_Bss
short valueOffset, byte[] dstBuffer, short	,
dstOffset, short dstLength)	
byte findTLV(byte tag, byte occurrence)	Find
short getCapacity()	Gcap
short getLength()	Glen
byte getValueByte(short valueOffset)	Gvbv
short getValueLength()	Gyle
short getValueShort(short valueOffset)	Gvsh
Shore Jeerarasshore (Shore Varacorrises)	Gvan

A.2.6 ProactiveHandler methods

Method Name	Acronyms
void init(byte type, byte qualifier, byte dstDevice)	Init
void initCloseChannel(byte bChannelId)	Icch
<pre>void initDisplayText(byte qualifier, byte dcs, byte[] buffer, short offset, short length)</pre>	Indt
<pre>void initGetInkey(byte qualifier, byte dcs, byte[] buffer, short offset, short length)</pre>	Ingk
<pre>void initGetInput(byte qualifier, byte dcs, byte[] buffer, short offset, short length, short minRespLength, short maxRespLength)</pre>	Ingi
void initMoreTime()	Inmt
byte send()	Send
Inherited method name: EditHandler	
<pre>void appendArray(byte[] buffer, short offset, short length)</pre>	Apda
void appendTLV(byte tag, byte value)	Aptlbb
void appendTLV(byte tag, byte[] value, short	Aptlb_Bss

Method Name	Acronyms
valueOffset, short valueLength)	_
<pre>void appendTLV(byte tag, byte[] value1, short</pre>	Aptlb_Bss_Bss
<pre>value10ffset, short value1Length, byte[] value2,</pre>	. – –
short value2Offset, short value2Length)	
<pre>void appendTLV(byte tag, byte value1, byte value2)</pre>	Aptlbbb
<pre>void appendTLV(byte tag, byte value1, byte[] value2,</pre>	Aptlbb_Bss
short value2Offset, short value2Length)	
<pre>void appendTLV(byte tag, byte value1, short value2)</pre>	Aptlbbs
<pre>void appendTLV(byte tag, short value)</pre>	Aptlbs
<pre>void appendTLV(byte tag, short value1, short value2)</pre>	Aptlbss
void clear()	Cler
Inherited method name: ViewHandler	
<pre>byte compareValue(short valueOffset, byte[]</pre>	Cprv
compareBuffer, short compareOffset, short	
compareLength)	
<pre>short copy(byte[] dstBuffer, short dstOffset, short dstLength)</pre>	Сору
<pre>short copyValue(short valueOffset, byte[] dstBuffer,</pre>	Сруч
short dstOffset, short dstLength)	
<pre>byte findAndCompareValue(byte tag, byte[]</pre>	Facrb_Bs
compareBuffer, short compareOffset)	
byte findAndCompareValue(byte tag, byte occurence,	Facrbbs_Bss
short valueOffset, byte[] compareBuffer, short	
<pre>compareOffset, short compareLength) short findAndCopyValue(byte taq, byte[] dstBuffer,</pre>	Faculty Do
short dstOffset)	Facyb_Bs
short findAndCopyValue(byte tag, byte occurence,	Facybbs_Bss
short valueOffset, byte[] dstBuffer, short	l acybbs_bss
dstOffset, short dstLength)	
byte findTLV(byte tag, byte occurrence)	Find
short getCapacity()	Gcap
short getLength()	Glen
byte getValueByte(short valueOffset)	Gvby
short getValueLength()	Gyle
short getValueShort(short valueOffset)	Gysh
<u> </u>	0 7 311

A.2.7 ProactiveResponseHandler methods

Method Name	Acronyms
short copyAdditionalInformation(byte[] dstBuffer,	Cpai
short dstOffset, short dstLength)	
short copyChannelData(byte[] dstBuffer, short	Cchd
dstOffset, short dstLength)	
<pre>short copyTextString(byte[] dstBuffer, short dstOffset)</pre>	Cpts
short getAdditionalInformationLength()	Gtil
byte getChannelIdentifier()	Gcid
short getChannelStatus(byte channelIdentifier)	Gcst
byte getGeneralResult()	Gtgr
byte getItemIdentifier()	Gtii
byte getTextStringCodingScheme()	Gtcs
short getTextStringLength()	Gttl
Inherited method name: ViewHandler	
byte compareValue(short valueOffset, byte[]	Cprv
compareBuffer, short compareOffset, short	- r
compareLength)	
short copy(byte[] dstBuffer, short dstOffset, short	Сору
dstLength)	1,3
<pre>short copyValue(short valueOffset, byte[] dstBuffer,</pre>	Сруу
short dstOffset, short dstLength)	
byte findAndCompareValue(byte tag, byte[]	Facrb_Bs
compareBuffer, short compareOffset)	-
byte findAndCompareValue(byte tag, byte occurence,	Facrbbs_Bss
short valueOffset, byte[] compareBuffer, short	
compareOffset, short compareLength)	

Method Name	Acronyms
<pre>short findAndCopyValue(byte tag, byte[] dstBuffer, short dstOffset)</pre>	Facyb_Bs
<pre>short findAndCopyValue(byte tag, byte occurence, short valueOffset, byte[] dstBuffer, short dstOffset, short dstLength)</pre>	Facybbs_Bss
byte findTLV(byte tag, byte occurrence)	Find
short getCapacity()	Gcap
short getLength()	Glen
byte getValueByte(short valueOffset)	Gvbys
short getValueLength()	Gvle
short getValueShort(short valueOffset)	Gvsh

A.2.8 ToolkitConstants methods

Method Name	Acronyms
Constants	Cons

A.2.9 ToolkitInterface methods

Method Name	Acronyms
void processToolkit(short event)	Prtk

A.2.10 ToolkitRegistry methods

Method Name	Acronyms
byte allocateServiceIdentifier()	Asid
byte allocateTimer()	Atim
<pre>void changeMenuEntry(byte id, byte[] menuEntry, short offset, short length, byte nextAction, boolean helpSupported, byte iconQualifier, short iconIdentifier)</pre>	Cmet
void clearEvent(short event)	Cevt
<pre>public void deregisterFileEvent(short event, byte[] baFileList, short sOffset1, short sLength1, byte[] baADFAid, short sOffset2, byte bLength2)</pre>	Drfes_Bss_Bss
<pre>public void deregisterFileEvent(short event, FileView aFileView)</pre>	Drfeso
void disableMenuEntry(byte id)	Dmet
void enableMenuEntry(byte id)	Emet
short getPollInterval()	Gpol
byte initMenuEntry(byte[] menuEntry, short offset, short length, byte nextAction, boolean helpSupported, byte iconQualifier, short iconIdentifier)	Imet
boolean isEventSet(short event)	levs
<pre>public void registerFileEvent(short event, byte[] baFileList, short sOffset1, short sLength1, byte[] baADFAid, short sOffset2, byte bLength2)</pre>	Rgfes_Bss_Bsb
<pre>public void registerFileEvent(short event, FileView aFileView)</pre>	Rgfeso
<pre>void releaseServiceIdentifier(byte serviceIdentifier)</pre>	Rsid
void releaseTimer(byte timerIdentifier)	Rtim
void requestPollInterval(short duration)	Rpol
void setEvent(short event)	Sevt
<pre>void setEventList(short[] eventList, short offset, short length)</pre>	SevI
<pre>public void setMenuEntryTextAttribute(byte id, byte[] textAttribute, short offset, short length)</pre>	Smta

A.2.11 ViewHandler methods

Tests are done in inheriting interfaces EnvelopeHandler, EnvelopeResponseHandler, ProactiveHandler and ProactiveResponseHandler.

A.2.12 EnvelopeHandlerSystem methods

Method Name	Acronyms
<pre>public static EnvelopeHandler getTheHandler()</pre>	Gthd

A.2.13 EnvelopeResponseHandlerSystem methods

Method Name	Acronyms
public static EnvelopeResponseHandler getTheHandler()	Gthd

A.2.14 ProactiveHandlerSystem methods

Method Name	Acronyms
public static ProactiveHandler getTheHandler()	Gthd

A.2.15 ProactiveResponseHandlerSystem methods

Method Name	Acronyms
<pre>public static ProactiveResponseHandler getTheHandler()</pre>	Gthd

A.2.16 TerminalProfile methods

Method Name	Acronyms
static boolean check(byte index)	Checb
<pre>static boolean check(byte[] mask, short offset, short length)</pre>	Chec_Bss
static boolean check(short index)	Checs
<pre>static short copy(short startOffset, byte[] dstBuffer, short dstOffset, short dstLength)</pre>	Сору
static short getValue(short idx)	Gvals
static short getValue(short indexMSB, short indexLSB)	Gvalss

A.2.17 ToolkitRegistrySystem methods

Method Name	Acronyms
<pre>public static ToolkitRegistry getEntry()</pre>	Gety

A.2.18 ToolkitException methods

Method Name	Acronyms
Constants	Cons
<pre>public ToolkitException(short reason)</pre>	Coor
<pre>public static void throwIt(short reason)</pre>	Thit

A.3 uicc.system package

HandlerBuilder	Hbd
UICCPlatform	Upt

A.3.1 BERTLVEditHandler methods

Method Name	Acronyms
static ViewHandler buildTLVHandler(byte type, short capacity)	Bthdbs
static ViewHandler buildTLVHandler(byte type, short capacity, byte[] buffer, short bOffset, short bLength)	Bthdbs_Bss

A.3.2 UICCPlatform methods

Method Name	Acronyms
<pre>public static byte[] getTheVolatileByteArray()</pre>	Gvba

A.4 uicc.access.fileadministration package

Interface / Class Name	Acronyms
AdminFileView	Afv
AdminFileViewBuilder	Afb
AdminException	Aex

A.4.1 AdminFileView methods

Method Name	Acronyms
public void createFile(ViewHandler viewHandler)	Crtf
public void deleteFile(short fid)	Dltf
public void resizeFile(ViewHandler viewHandler)	Rszf
Inherited method name: FileView	
<pre>public void activateFile()</pre>	Actf
<pre>public void deactivateFile()</pre>	Dacf
<pre>public short increase(byte[] incr, short incrOffset, short incrLength, byte[] resp, short respOffset)</pre>	Incr
<pre>public short readBinary(short fileOffset, byte[] resp, short respOffset, short respLength)</pre>	Redb
<pre>public short readRecord(short recNumber, byte mode, short recOffset, byte[] resp, short respOffset, short respLength)</pre>	Redr
<pre>public short searchRecord(byte mode, short recordNum, short searchIndication, byte[] patt, short pattOffset, short pattLength, short[] response, short respOffset, short respLength)</pre>	Sear
public void select(byte sfi)	Slctb
public void select(short fid)	Slcts
<pre>public short select(short fid, byte[] fcp, short fcpOffset, short fcpLength)</pre>	Slct_Bss
<pre>public short status(byte[] fcp, short fcpOffset, short fcpLength)</pre>	Stat
<pre>public void updateBinary(short fileOffset, byte[] data, short dataOffset, short dataLength)</pre>	Updb
<pre>public void updateRecord(short recNumber, byte mode, short recOffset, byte[] data, short dataOffset, short dataLength)</pre>	Updr

A.4.2 AdminFileViewBuilder methods

Method Name	Acronyms
public static AdminFileView	Gtafb
<pre>getTheUICCAdminFileView(byte bType)</pre>	
public static AdminFileView	Gtaf Bsbb
<pre>getTheAdminFileView(byte[] buffer, short bOffset,</pre>	_
byte bLength, byte bType)	
public static AdminFileView	Gtafob
<pre>getTheAdminFileView(javacard.framework.AID aid, byte</pre>	
bType)	

A.4.3 AdminException methods

Method Name	Acronyms
Constants	Cons
public AdminException(short reason)	Coor
<pre>public static void throwIt(short reason)</pre>	Thit

A.5 Acronyms for CAT Runtime Environment tests

Minimum handler availability	Mha
Handler integrity	Hin
Applet triggering	Apt
Proactive command sending by the CAT Runtime Environment	Pcs
Exception handling	Exh
Envelope response posting	Erp
Toolkit installation	Tin
UICC file access	Ufa
Other parts transferred from API to CAT RE	Api
Registration	Reg
UICC toolkit applet	Uta
Proactive command handling	Pch
CAT Runtime Environment behaviour	Cat

A.5.1 Minimum handler availability

Method Name	Acronyms
ProactiveHandler	Pahd
ProactiveResponseHandler	Prhd
EnvelopeHandler	Enhd
EnvelopeResponseHandler	Erhd

A.5.2 Handler integrity

Method Name	Acronyms
ProactiveHandler	Pahd
ProactiveResponseHandler	Prhd
EnvelopeHandler	Enhd
EnvelopeResponseHandler	Erhd

A.5.3 Applet triggering

Method Name	Acronyms
General behaviour	Genb
EVENT_PROFILE_DOWNLOAD	Epdw
EVENT_MENU_SELECTION	Emse
EVENT_MENU_SELECTION_HELP_REQUEST	Emsh
EVENT_CALL_CONTROL_BY_NAA	Eccn
EVENT_TIMER_EXPIRATION	Etex
EVENT_EVENT_DOWNLOAD_MT_CALL	Edmc
EVENT_EVENT_DOWNLOAD_CALL_CONNECTED	Edcc
EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED	Edcd
EVENT_EVENT_DOWNLOAD_LOCATION_STATUS	Edls
EVENT_EVENT_DOWNLOAD_USER_ACTIVITY	Edua
EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE	Edis
EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS	Edcr
EVENT_UNRECOGNIZED_ENVELOPE	Euev
EVENT_STATUS_COMMAND	Estc
EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION	Edlg
EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION	Edbt
EVENT_FIRST_COMMAND_AFTER_ATR	Efca
EVENT_EVENT_DOWNLOAD_DATA_AVAILABLE	Edda
EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS	Edcs
EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHANGE	Edat
EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETER_CHANGED	Eddp
EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION	Edlc
EVENT_APPLICATION_DESELECT	Eade
EVENT_PROACTIVE_HANDLER_AVAILABLE	Epha
EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_CHANGE	Edns
EVENT_EVENT_DOWNLOAD_BROWSING_STATUS	Edbs

A.5.4 Proactive command sending by the CAT Runtime Environment

Method Name	Acronyms
System Proactive Commands	Spco
Interaction with UICC commands	Igco
Proactive Command Control	Pcco

A.5.5 Exception handling

Method Name	Acronyms
General Behaviour	Genb
Interaction with Multiple Triggering	Imtg

A.5.6 Envelope response posting

Method Name	Acronyms
EVENT_CALL_CONTROL_BY_NAA	Eccn
EVENT_UNRECOGNIZED_ENVELOPE	Euen
General Behaviour	Genb

A.5.7 Toolkit installation

Method Name	Acronyms
General Behaviour	Genb
Timers Allocation	Tmal
Item Identifier	Itid
Item Position	Itpo
Maximum Text Length for a menu entry	Mlme
Maximum number of menu entries	Nbme
Access Domain	Acdo
Priority Level	Prlv
Channel Allocation	Chal
Minimum Security Level	Mslv
TAR Value(s) of the Toolkit Application instance	Tarv
Services Allocation	Sval

A.5.8 UICC file access

Method Name	Acronyms
File View	View
File Access	Facc

A.5.9 Other parts transferred from API to CAT RE

Method Name	Acronyms
A handler is a temporary JCRE Entry Point object	Неро
Transaction	Tran
Timer Id between Applets	Tmid

A.5.10 Registration

Method Name	Acronyms
Event registration	E∨tr

A.5.11 UICC toolkit applet

Method Name	Acronyms
Data and function sharing	Dafs
Package deletion	Pdel
Applet deletion	Adel
Object deletion	Odel

A.5.12 Proactive command handling

Method Name	Acronyms
General behaviour	Genb

A.5.13 CAT Runtime Environment behaviour

Method Name	Acronyms
Context	Ctxt

Annex B (normative): Global prepersonalization

This annex defines the file systems used to pass the test suite. It is composed of the UICC File System Server (including MF and all DFs and EFs that are located under the MF) and of two Application Dedicated Files System Servers, ADF1 and ADF2.

ADF1 and ADF2 shall use the following AIDs (as defined in section "4.7 AID Coding"):

- ADF1: A0 00 00 00 09 00 05 FF FF FF FF 89 E0 00 00 02
- ADF2: A0 00 00 00 09 00 05 FF FF FF FF 89 D0 00 00 02

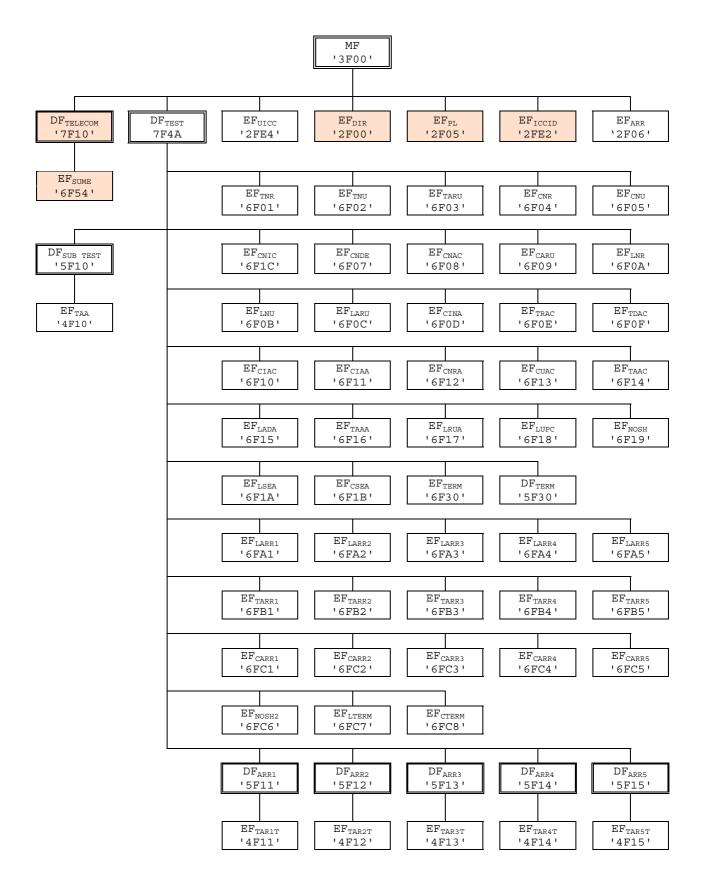
Under the MF, the mandatory files defined in TS 102 221 [5] are present, as the $DF_{TELECOM}$ with the EF_{SUME} as defined in TS 102 222 [7] and some other files necessary for the tests.

The files defined for ADF1 and ADF2 are only necessary for the tests.

All files are shareable if not specified otherwise.

Except if specified the access conditions on DFs shall be set to ALWAYS for all commands.

The global directory structures are defined in figures B.1 to B.3:



NOTE: Files with shaded background are mandatory and defined in ETSI TS 102 221 [5].

Figure B.1: File identifiers and directory structures under MF

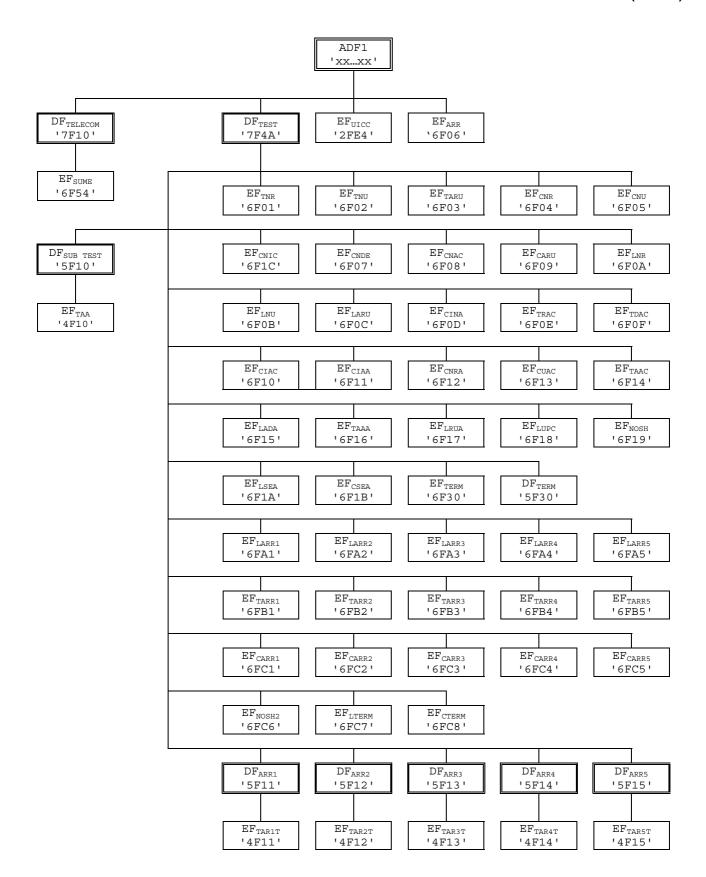


Figure B.2: File identifiers and directory structures under ADF1

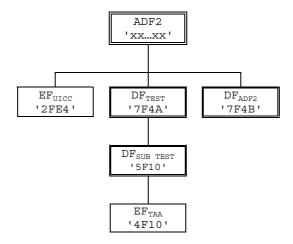


Figure B.3: File identifiers and directory structures under ADF2

Application PIN 1(Global PIN 1) shall be associated to ADF1.

Second Application PIN 1 (Local PIN 1) shall be associated to ADF1.

The value for Application PIN 1(Global PIN 1) shall be "0x31 0x31 0x31 0x31 0xFF 0xFF 0xFF 0xFF" and its state shall be 'disabled' during test applets execution.

The value for Second Application PIN 1(Local PIN 1) shall be "0x31 0x32 0x33 0x34 0xFF 0xFF 0xFF 0xFF" and its state shall be 'enabled' during test applets execution.

The value for ADM1 shall be "0x31 0x31 0x31 0x31 0x31 0x31 0x31 0x31" and its state shall be 'enabled' during test applets execution.

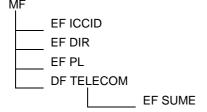
The value for ADM2 shall be "0x32 0x32 0x32 0x32 0x32 0x32 0x32 0x32" and its state shall be 'enabled' during test applets execution.

B.1 UICC file system server mandatory prepersonalization

Table B.1 shows the mandatory pre-personalization, the file system and the files' content, that the test UICC cards shall contain.

Table B.1

Name	Identifier	Default Value	Special Features
EF _{ICCID}	2FE2	OF FF FF FF FF FF FF FF	This value is not compliant with TS 102 221 [5]
EF dir	2F00	Record 1: 61 12 4F 10 AID_1 Record 2: 61 12 4F 10 AID_2	
EF _{PL}	2F05	01 FF	
EF _{sume}	6F54	85 09 55 49 43 43 20 54 45 53 54 FF FF FF FF FF FF	Under DF Telecom, compliant with TS 102 222 [7]



B.2 UICC file system server test default prepersonalization

Figure B.1 shows the additional pre-personalization, the file system and files' content under the Master File, that the test UICC card shall contain.

B.2.1 EF_{UICC} (UICC Test EF)

MF	
	_ EF UICC

	Identifier: '2FE4' Structure: transparent		Mandatory		
	File size: 3 bytes		Update activity	y: low	
		Access Conditions	:		
	READ		ALWAYS		
	UPDAT	Έ	ALWAYS		
	DEACT	TVATE	ALWAYS		
	ACTIVA	ATE	ALWAYS		
	,				
Bytes	Description	Defa	ault Value	M/O	Length
1 to 3	Test Data	AA	AA AA	M	3 bytes

B.2.2 EF_{ARR} (UICC Test Access Rules EF)

MF	
	EF ARR

Identifier: '2F06' Stru		ucture: Linear fixed	0	ptional	
	SFI : none				
	Record length: n bytes		Update activity	y: low	
	Access Conditions:				
	READ		ALWAYS		
	UPDATI	=	ALWAYS		
DEACTI		VATE	ALWAYS		
	ACTIVA	TE	ALWAYS		
Bytes	Description		Default Value	M/O	Length
1 to n	Access Rule 1	Always	s for all commands	М	n bytes
n+1 to 2n	Access Rule 2	Access Rule 2 Never for all commands		М	n bytes
2n+1 to 3n	Access Rule 3	Global PIN1 & ADM1 for all commands		М	n bytes
3n+1 to 4n	Access Rule 4	Global PIN1 ADM1 for all commands		М	n bytes
4n+1 to 5n	Access Rule 5	ADM2	for all commands	М	n bytes

Access rules definition:

	Delete selft	Terminat card Usage/ Terminate DF	Activate File	Deactivate File	Create File (DF creation)	Create File (EF creation)	Delete File (child)	
Record nb	Delete File	Terminate EF	Activate File	Deactivate File	Write Binary, Write Record, Append Record	Update Binary, Update Record, Erase Binary	Read binary, Read Record, Search Binary, Search Record	Increase, resize
1	Always	Always	Always	Always	Always	Always	Always	Always
2	Never	Never	Never	Never	Never	Never	Never	Never
3	Global PIN1	Global PIN1	Global PIN1	Global PIN1	Global PIN1	Global PIN1	Global PIN1	Global PIN1
	& ADM1	& ADM1	& ADM1	& ADM1	& ADM1	& ADM1	& ADM1	& ADM1
4	Global PIN1 ADM1	Global PIN1 ADM1	Global PIN1 ADM1	Global PIN1 ADM1	Global PIN1 ADM1	Global PIN1 ADM1	Global PIN1 ADM1	Global PIN1 ADM1
5	ADM2	ADM2	ADM2	ADM2	ADM2	ADM2	ADM2	ADM2

B.2.3 DF_{TEST} (UICC Access Tests DF)

Identifier: '7F4A'

MF

DF TEST

B.2.3.1 EF_{TNR} (Transparent Never Read)



	Identifier: '6F01'	Structure: transparent		Ma	ndatory
	SFI: '01'				
	File size: 3 bytes		Update activity: low		
		Access Condition	ons:		
	READ)	NEVER		
	UPDA	TE	ALWAYS		
	DEAC	TIVATE	ALWAYS		
	ACTIV	ATE	ALWAYS		
Bytes	Description		efault Value	M/O	Length
1 to 3	Test Data		AA AA AA	М	3 bytes

B.2.3.2 EF_{TNU} (Transparent Never Update)



	Identifier: '6F02'	Structure: transparent		Ma	ndatory
	SFI: '02'				
	File size: 3 bytes		Update activity	: low	
	READ UPDA DEACT ACTIV	TIVATE	: ALWAYS NEVER ALWAYS ALWAYS		
Bytes	Description	Defa	ult Value	M/O	Length
1 to 3	Test Data	55	5 55 55	М	3 bytes

B.2.3.3 EF_{TARU} (Transparent Always Read and Update)

MF		
	DF TEST	
		_ EF TARU

•	Identifier: '6F03'	Struc	Structure: transparent		andatory
	SFI: '03'				
	File size: 260 bytes		Update act	ivity: low	
		Access Condition	ns:		
	READ		ALWAYS		
	UPDATE		ALWAYS		
	DEACT	ΓΙVΑΤΕ	ALWAYS		
	ACTIVA	ATE	ALWAYS		
Bytes	Description	De	efault Value	M/O	Length
1 to 260	Test Data		FF FF	М	260 byte

B.2.3.4 EF_{CNR} (Cyclic Never Read)

MF		
	DF TEST	
		EF CNR

Identifier: '	6F04'	Structure: cyclic		Mandatory
Ç	SFI: '04'			
Record	length: 3 bytes	Upda	Update activity: high	
	Access C	onditions:		
	READ	NEVER		
	UPDATE	ALWAYS		
	INCREASE	ALWAYS		
	DEACTIVATE	ALWAYS		
	ACTIVATE	ALWAYS		
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

B.2.3.5 EF_{CNU} (Cyclic Never Update)

MF		
	DF TEST	
		_ EF CNU

Identifier:	Identifier: '6F05'			Mandatory
	SFI: '05'			
Record	Record length: 3 bytes		e activity:	high
	Access	Conditions:		
	READ	ALWAYS		
	UPDATE			
	INCREASE	NEVER		
	DEACTIVATE	ALWAYS		
	ACTIVATE	ALWAYS		
Logical Record Number	Description	Default Value	M/O	Length
1	Test Data	00 00 00	M	3 bytes
2	Test Data	00 00 00	M	3 bytes

B.2.3.6 EF_{CNIC} (Cyclic Never Increase)



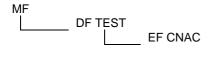
Identifier:	Identifier: '6F1C'		Structure: cyclic Mandat		Mandatory
Record	Record length: 3 bytes		Update activity: high		
Access Conditions:					
	READ	coco conan	ALWAYS		
	UPDATE				
	INCREASE		NEVER		
	DEACTIVATE		ALWAYS		
	ACTIVATE	Ē	ALWAYS		
	T		5 ();)()	1	1
_	Logical Record Description		Default Value	M/O	Length
Number					
1	1 Test Data		00 00 00	М	3 bytes
2	Test Data		00 00 00	М	3 bytes

B.2.3.7 EF_{CNDE} (Cyclic Never Deactivate)



Identifier:	Identifier: '6F07		Structure: cyclic	
Record	length: 3 bytes	Update	Update activity: high	
	Access C	onditions:		
	READ	ALWAYS		
	UPDATE			
	INCREASE	ALWAYS		
	DEACTIVATE	NEVER		
	ACTIVATE	ALWAYS		
Logical Record	Description	Default Value	M/O	Length
Number	Number			
1	Test Data	00 00 00	М	3 bytes
2	Test Data	00 00 00	М	3 bytes

B.2.3.8 EF_{CNAC} (Cyclic Never Activate)



Identifier: '6F08'			Structure: cyclic N		Mandatory	
Record length: 3 bytes		Update activity: high				
	Access Conditions:					
	READ					
	UPDATE					
	INCREASE			ALWAYS		
	DEACTIVATE					
	ACTIVAT	E	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	

B.2.3.9 EF_{CARU} (Cyclic Always Read and Update)



Identifier:	Identifier: '6F09'		Structure: cyclic Mandator			
Record	Record length: 3 bytes		Update activity: high			
	Access Conditions:					
	READ	ALWAYS				
	UPDATE	ALWAYS				
	INCREASE	ALWAYS				
	DEACTIVATE	ALWAYS				
	ACTIVATE	ALWAYS				
Logical Record Number	Description	Default Value	M/O	Length		
1	Test Data	55 55 55	М	3 bytes		
2	Test Data	AA AA AA	М	3 bytes		

B.2.3.10 EF_{LNR} (Linear Fixed Never Read)



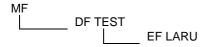
Identifier: '6F0A'		Str	ucture: linear fixed	Mar	ndatory
Record	Record length: 4 bytes		Update ac	tivity: low	
Access Conditions:					
	READ				
	UPDATE				
	DEACTIVATE		ALWAYS		
	ACTIVAT	ΓΕ	ALWAYS		
	T			Table 1	
Logical Record	Description		Default Value	M/O	Length
Number					
1	Test Data - Record 1		FF FF FF FF	M	4 bytes
2	Test Data - Record	d 2	FF FF FF FF	M	4 bytes

B.2.3.11 EF_{LNU} (Linear Fixed Never Update)

MF		
	DF TEST	
		EF LNU

Identifier: '6	Identifier: '6F0B'		ucture: linear fixed	Mar	ndatory
Record	Record length: 4 bytes		Update acti	vity: low	
	Access Conditions:				
	READ		ALWAYS		
	UPDATE		NEVER		
	DEACTIVATE		ALWAYS		
	ACTIVAT	ΓE	ALWAYS		
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data - Record	1 1	FF FF FF FF	M	4 bytes
2	Test Data - Record	12	FF FF FF FF	M	4 bytes

B.2.3.12 EF_{LARU} (Linear Fixed Always Read and Update)



Identifier: '6F0C'		Str	ucture: linear fixed	Mar	ndatory
Record	Record length: 4 bytes		Update ac	tivity: low	
Access Conditions:					
	READ		ALWAYS		
	UPDATE		ALWAYS		
	DEACTI	VATE	ALWAYS		
	ACTIVA	ΓΕ	ALWAYS		
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data - Record	d 1	55 55 55 55	M	4 bytes
2	Test Data - Record	d 2	AA AA AA	М	4 bytes

B.2.3.13 EF_{CINA} (Cyclic Increase Not Allowed)



Identifie	er: '6F0D'	Structure: cyclic	Man	datory
Reco	ord length: 3 bytes	Update activity:	high	
	Access C	onditions:		
	READ	ALWAYS		
	UPDATE	ALWAYS		
	INCREASE	NEVER		
	DEACTIVATE	ALWAYS		
	ACTIVATE	ALWAYS		
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

B.2.3.14 EF_{TRAC} (Transparent Read Access Condition ADM 2)

MF		
	DF TEST	
		_ EF TRAC

Identifie	er: '6F0E'	Stru	ucture: transparent	Man	datory
Fi	ile size: 3 bytes		Update activ	ity: low	
	Ac	cess Condit	ions:		
	READ		ADM 2		
	UPDATE		ALWAYS		
	DEACTIV	ATE	ALWAYS		
	ACTIVAT	E	ALWAYS		
Bytes	Description		Default Value	M/O	Length
1	Test Data		00 00 00	М	3 bytes

B.2.3.15 EF_{TDAC} (Transparent Deactivate Access Condition Application PIN 1)

MF		
	DF TEST	
		EF TDAC

Identifie	er: '6F0F'	Stru	ucture: transparent	Man	datory
Fi	ile size: 3 bytes		Update activi	ty: low	
	Acce	ess Condit	ions:		
	READ		ALWAYS		
	UPDATE		ALWAYS		
	DEACTIVATE		Application PIN 1		
	ACTIVATE		ALWAYS		
Bytes	Description		Default Value	M/O	Length
1	Test Data		00 00 00	М	3 bytes

B.2.3.16 EF_{CIAC} (Cyclic Increase Access Condition ADM 2)



Identifie	er: '6F10'		Structure: cyclic		Man	datory
Reco	Record length: 3 bytes		Update activity: low			
	Ac	cess Condi	tions:			
	READ	occo condi	ALWAYS			
	UPDATE		ALWAYS			
	INCREA	SE	ADM 2			
	DEACTIV	ATE	ALWAYS			
	ACTIVAT	E	ALWAYS			
						ı
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

B.2.3.17 EF_{CIAA} (Cyclic Increase Access Condition ADM 1)



Identifie	er: '6F11'		Structure: cyclic	Man	datory
Reco	ord length: 3 bytes		Update activity: low		
	Ac	cess Condi	tions:		
	READ		ALWAYS		
	UPDATE		ALWAYS		
	INCREAS	E	ADM 1		
	DEACTIV	'ATE	ALWAYS		
	ACTIVAT	E	ALWAYS		
	T			1	
Logical Record	Description		Default Value	M/O	Length
Number					
1	Test Data		00 00 00	M	3 bytes
2	Test Data		00 00 00	M	3 bytes

B.2.3.18 EF_{CNRA} (Cyclic Never Activate)



Identifie	er: '6F12'	Structure: cyclic	Man	datory
Reco	ord length: 3 bytes	Update activity:	low	
	Access C	onditions:		
	READ	ALWAYS		
	UPDATE	ALWAYS		
	INCREASE	ALWAYS		
	DEACTIVATE	ALWAYS		
	ACTIVATE	NEVER		
		T = 2	1	I
Logical Record	Description	Default Value	M/O	Length
Number				
1	Test Data	00 00 00	M	3 bytes
2	Test Data	00 00 00	M	3 bytes

The Operational state bit of Life Cycle Status Integer shall be DEACTIVATED as defined in TS 102 221 [5].

B.2.3.19 EF_{CUAC} (Cyclic Update Access Condition Application PIN 1)

MF		
	DF TEST	
	•	EF CUAC

Identifie	er: '6F13'	,	Structure: cyclic	Man	datory
Reco	ord length: 3 bytes		Update activ	ity: high	
	Ad	cess Condit	ions:		
	READ		Application PIN 1		
	UPDATE		Application PIN 1		
	INCREASE		Application PIN 1		
	DEACTI	VATE	ADM 1		
	ACTIVA	TE	ADM 1		
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data		00 00 00	M	3 bytes
2	Test Data		00 00 00	M	3 bytes
3	Test Data		00 00 00	M	3 bytes

B.2.3.20 EF_{TAAC} (Transparent Activate Access Condition Application PIN 1)



Identifie	er: '6F14'	Structure: transparent	Man	datory
F	ile size: 3 bytes	Update activity:	high	
	Access C	Conditions:		
	READ	Application PIN 1		
	UPDATE	ADM 1		
	DEACTIVATE	ADM 1		
	ACTIVATE	Application PIN 1		
Bytes	Description	Default Value	M/O	Length
1	Test Data	FF FF FF	М	3 bytes

B.2.3.21 EF_{LADA} (Linear Fixed Activate Deactivate Access Condition ADM 2)

MF		
	DF TEST	
	='	EF LADA

Identifier: '6F15'		Str	Structure: linear fixed		datory
Reco	ord length: 3 bytes		Update activity: high		
	Ac	cess Condit	ions:		
	READ		Application PIN 1		
	UPDATE		Application PIN 1		
	DEACTI	VATE	ADM 2		
	ACTIVA ⁻	TE	ADM 2		
Logical Record	Description		Default Value	M/O	Length
Number	700.1				- 19
1	Test Data		FF FF FF	М	3 bytes

B.2.3.22 EF_{TAAA} (Transparent All Access Conditions ADM 1)

MF		
	DF TEST	
		EF TAAA

Identifie	er: '6F16'	;	Structure: transparent	Man	datory
F	ile size: 3 bytes		Update activity: high		
	Ac	cess Cor	nditions:		
	READ		ADM 1		
	UPDATE		ADM 1		
	DEACTI\	/ATE	ADM 1		
	ACTIVAT	E	ADM 1		
Bytes	Description		Default Value	M/O	Length
1	Test Data		FF FF FF	M	3 bytes

B.2.3.23 EF_{LRUA} (Linear Fixed Read Update Access Condition Application PIN 1)



Identifie	er: '6F17'	Str	ucture: linear fixed	Man	datory
Reco	cord length: 3 bytes		Update activity: high		
	Ac	cess Condit	ions:		
	READ		Application PIN 1		
	UPDATE		Application PIN 1		
	DEACTI	VATE	ADM 1		
	ACTIVA	TE	ADM 1		
			5 (1) ()	1	
Logical Record	Description		Default Value	M/O	Length
Number					
1	Test Data		FF FF FF	M	3 bytes

B.2.3.24 EF_{LUPC} (Linear Fixed Update Access Condition ADM 2)

MF		
	DF TEST	
		_ EF LUPC

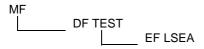
Identifie	r: '6F18'	Str	ucture: linear fixed	Man	datory
Record length: 10 bytes			Update activity: high		
Access Conditions:					
	READ		Application PIN 1		
	UPDATE	<u> </u>	ADM 2		
	DEACTI	VATE	ADM 1		
	ACTIVA	TE	ADM 1		
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data		11 11	М	10 bytes
2	Test Data		22 22	M	10 bytes

B.2.3.25 EF_{NOSH} (Not Shareable)

MF		
	DF TEST	
		EF NOSH

Identifie	er: '6F19'	Stru	ucture: transparent	Man	datory
Fi	ile size: 3 bytes		Update activi	ty: high	
	Acc	cess Condit	ions:		
	NO	T SHAREA	BLE		
	READ		ALWAYS		
	UPDATE		ALWAYS		
	DEACTIVA	ATE	ALWAYS		
	ACTIVATE		ALWAYS		
					T .
Bytes	Description		Default Value	M/O	Length
1	Test Data		FF FF FF	M	3 bytes

B.2.3.26 EF_{LSEA} (Linear File for SearchRecord tests)



Identifie	Identifier: '6F1A' Str		cture: Linear Fixed	Man	datory
Reco	rd length: 15 bytes		Update activity: high		
	Acces	s Condit	ions:		
	READ UPDATE DEACTIVATE ACTIVATE	≣	ALWAYS ALWAYS ALWAYS ALWAYS		
Bytes	Description		Default Value	M/O	Length
1	Test Data	01	02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F	М	15 bytes
2	Test Data	0A (OB OC OD OE OF 01 02 03 04 05 06 07 08 09	М	15 bytes
3	Test Data	04 (05 06 07 08 09 0A 0B 0C 0D 0E 0F 01 02 03	М	15 bytes
4	Test Data	07 0	08 09 0A 0B 0C 0D 0E 0F 01 02 03 04 05 06	М	15 bytes
5	Test Data	0A	01 02 03 0B 01 02 03 0C 01 02 03 0D 01 02	М	15 bytes
6	Test Data	03	02 01 03 02 01 03 02 01 03 02 01 03 02 01	М	15 bytes

B.2.3.27 EF_{CSEA} (Cyclic File for SearchRecord tests)

MF		
	DF TEST	
	_	EF CSEA

Identifie	Identifier: '6F1B' Structure: Cyclic M		Man	Mandatory	
Reco	Record length: 15 bytes Update activity: high		high		
	Access	s Condi	itions:		
	READ UPDATE DEACTIVATE ACTIVATE		ALWAYS ALWAYS ALWAYS ALWAYS		
Bytes	Description		Default Value	M/O	Length
1	Test Data	01	02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F	М	15 bytes
2	Test Data	0A	0B 0C 0D 0E 0F 01 02 03 04 05 06 07 08 09	М	15 bytes
3	Test Data	04	05 06 07 08 09 0A 0B 0C 0D 0E 0F 01 02 03	М	15 bytes
4	Test Data	07	08 09 0A 0B 0C 0D 0E 0F 01 02 03 04 05 06	М	15 bytes
5	Test Data	0A	01 02 03 0B 01 02 03 0C 01 02 03 0D 01 02	М	15 bytes
6	Test Data	03	3 02 01 03 02 01 03 02 01 03 02 01 03 02 01	М	15 bytes

B.2.3.28 EF_{TERM} (Terminated)



Identifie	er: '6F30'	Stru	cture: Transparent	Man	datory
Fi	ile size: 3 bytes		Update activit	y: low	
		LCSI:			
	TERMINATED				
	Ad	cess Condit	ions:		
	READ		ALWAYS		
	UPDATE	, A T.E.	ALWAYS		
	DEACTIV		ALWAYS		
	ACTIVAT	E	ALWAYS		
Bytes	Description		Default Value	M/O	Length
1	Test Data		FF FF FF	M	3 bytes

B.2.3.29 DF_{TERM} (DF Terminated)

Identifier: '5F30'

Access Conditions: Record 1 of EFARR (0x2F06 under MF and 0x6F06 under ADF1)

Life Cycle Status Information: Terminated

MF		
	DF TEST	
		DF TERM

B.2.3.30 EF_{LARR1} (Linear Fixed on Access Rule Reference 1)

MF		
	DF TEST	
		_ EF LARR1

Identifier: '6FA1' Stru		Structure: linear fixed Mandate		datory	
Recoi	rd length: 3 bytes		Update activ	ity: high	
		ccess Condit ecord 1 of E			
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data		11 11 11	М	3 bytes
2	Test Data		22 22 22	М	3 bytes

B.2.3.31 EF_{LARR2} (Linear Fixed on Access Rule Reference 2)



Identifier: '6FA2'		Str	Structure: linear fixed		Mandatory	
Reco	ord length: 3 bytes		Update activ	vity: high		
		cess Condit cord 2 of E				
Logical Record Number	Description		Default Value	M/O	Length	
1	Test Data		11 11 11	M	3 bytes	
2	Test Data		22 22 22	М	3 bytes	

B.2.3.32 EF_{LARR3} (Linear Fixed on Access Rule Reference 3)

MF		
	DF TEST	
<u>-</u>		EF LARR3

Identifier: '6FA3'		Str	Structure: linear fixed		Mandatory	
Reco	ord length: 3 bytes		Update acti	vity: high		
		ess Condit cord 3 of E				
Logical Record Number	Description		Default Value	M/O	Length	
1	Test Data		11 11 11	M	3 bytes	
2	Test Data		22 22 22	М	3 bytes	

B.2.3.33 EF_{LARR4} (Linear Fixed on Access Rule Reference 4)

MF		
	DF TEST	
		EF LARR4

Identifier: '6FA4' Stru		ucture: linear fixed	Man	datory	
Recor	d length: 3 bytes		Update activ	vity: high	
		ccess Condit ecord 4 of E			
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data		11 11 11	М	3 bytes
2	Test Data		22 22 22	M	3 bytes

B.2.3.34 EF_{LARR5} (Linear Fixed on Access Rule Reference 5)



Identifier: '6FA5'		Str	Structure: linear fixed		Mandatory	
Reco	ord length: 3 bytes		Update activ	vity: high		
		cess Condit cord 5 of E				
Logical Record Number	Description		Default Value	M/O	Length	
1	Test Data		11 11 11	М	3 bytes	
2	Test Data		22 22 22	M	3 bytes	

B.2.3.35 EF_{TARR1} (Transparent on Access Rule Reference 1)

MF		
	DF TEST	
		_ EF TARR1

Identifier: '6FB1'		Structure: transparent	Mandatory	
Fi	le size: 5 bytes	Update activit	ty: high	
		ess Conditions: ord 1 of EF _{ARR}		
Logical Record Number	Description	Default Value	M/O	Length
1	Test Data	11 11 11 11 11	M	5 bytes

B.2.3.36 EF_{TARR2} (Transparent on Access Rule Reference 2)

MF		
	DF TEST	
		FF TARR2

Identifier: '6FB2' Stru		ucture: transparent	Man	datory	
Fi	le size: 5 bytes		Update activ	ity: high	
		ccess Condit ecord 2 of E			
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data		11 11 11 11 11	М	5 bytes

B.2.3.37 EF_{TARR3} (Transparent on Access Rule Reference 3)



Identifier: '6FB3'		Str	Structure: transparent		datory
F	ile size: 5 bytes		Update activ	rity: high	
		cess Condit ecord 3 of E			
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data		11 11 11 11 11	M	5 bytes

B.2.3.38 EF_{TARR4} (Transparent on Access Rule Reference 4)



Identifier: '6FB4'		Structure: transparent	Man	datory
F	ile size: 5 bytes	Update activity	/: high	
		s Conditions: d 4 of EF _{ARR}		
Logical Record Number	Description	Default Value	M/O	Length
1	Test Data	11 11 11 11 11	М	5 bytes

B.2.3.39 EF_{TARR5} (Transparent on Access Rule Reference 5)

MF		
	DF TEST	
		EF TARR5

Identifie	er: '6FB5'	Stru	ucture: transparent	Man	datory
Fi	le size: 5 bytes		Update activity	r: high	
		ccess Condit ecord 5 of E			
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data		11 11 11 11 11	М	5 bytes

B.2.3.40 EF_{CARR1} (Cyclic Access Rule Reference 1)



Identifie	Identifier: '6FC1'		Structure: cyclic		Mandatory	
Reco	ord length: 3 bytes		Update activ	ity: high		
		ccess Condit ecord 1 of E				
Logical Record Number	Description		Default Value	M/O	Length	
1	Test Data		11 11 11	М	3 bytes	
2	Test Data		22 22 22	M	3 bytes	

B.2.3.41 EF_{CARR2} (Cyclic Access Rule Reference 2)

MF		
	DF TEST	
		EF CARR2

Identifier: '6FC2'		Structure: cycl	ic Mar	ndatory
Reco	ord length: 3 bytes	l	Jpdate activity: high	
		ess Conditions: ord 2 of EF _{ARR}		
Logical Record Number	Description	Default \	Value M/O	Length
1	Test Data	11 11	11 M	3 bytes
2	Test Data	22 22	22 M	3 bytes

B.2.3.42 EF_{CARR3} (Cyclic Access Rule Reference 3)

MF		
	DF TEST	
	_	EF CARR3

Identifier	Identifier: '6FC3'		Structure: cyclic	Man	datory
Reco	rd length: 3 bytes		Update activ	vity: high	
		ccess Condit ecord 3 of E			
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data		11 11 11	M	3 bytes
2	Test Data		22 22 22	М	3 bytes

B.2.3.43 EF_{CARR4} (Cyclic Access Rule Reference 4)



Identifie	er: '6FC4'		Structure: cyclic	Man	datory
Rec	ord length: 3 bytes		Update activ	ity: high	
		cess Cor cord 4 o			
Logical Record Number	Description		Default Value	M/O	Length
1	Test Data		11 11 11	М	3 bytes
2	Test Data		22 22 22	М	3 bytes

B.2.3.44 EF_{CARR5} (Cyclic Access Rule Reference 5)

MF		
	DF TEST	
<u>-</u>		EF CARR5

Identifie	r: '6FC5'	Structure: cyclic	Man	datory
Record length: 3 bytes Update activity: high				
		ess Conditions: cord 5 of EF _{ARR}		
Logical Record Number	Description	Default Value	M/O	Length
1	Test Data	11 11 11	М	3 bytes
2	Test Data	22 22 22	М	3 bytes

B.2.3.45 EF_{NOSH2} (Not Shareable)

MF		
	DF TEST	
		EF NOSH2

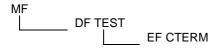
	Identifier: '6FC6'	Struc	cture: transparent	Ma	ndatory
	SFI: '06'				
	File size: 3 bytes		Update activity: high		
		Access Condition	ns:		
	READ		ALWAYS		
	UPDAT	Έ	ALWAYS		
	DEACT	TVATE	ALWAYS		
	ACTIVA	ATE	ALWAYS		
Bytes	Description	De	efault Value	M/O	Length
1 to 3	Test Data	F	FF FF FF	М	3 bytes

B.2.3.46 EF_{LTERM} (Linear File Terminated)



Identifie	r: '6FC7'	Stru	cture: Linear Fixed	Man	datory
Reco	Record length: 15 bytes Upda		Update activity: I	high	
		LCSI:			
	•	TERMINATE	D		
	Ac	cess Conditi	ions:		
	READ		ALWAYS		
	UPDATE		ALWAYS		
	DEACTIV	ATE	ALWAYS		
	ACTIVAT	E	ALWAYS		
Bytes	Description		Default Value	M/O	Length
1	Test Data	01	02 03 04 05 06 07 08 09 0A	M	15 bytes
			0B 0C 0D 0E 0F		

B.2.3.47 EF_{CTERM} (Cyclic File Terminated)

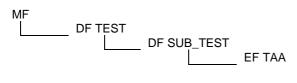


Identifie	Identifier: '6FC8'		Structure: Cyclic	Man	datory
Record length: 15 bytes Update activity: high					
		LCSI:			
	-	TERMINATI	ED		
	Ac	cess Condit	tions:		
	READ		ALWAYS		
	UPDATE		ALWAYS		
	DEACTIV	ATE	ALWAYS		
	ACTIVATI	E	ALWAYS		
Bytes	Description		Default Value	M/O	Length
1	Test Data	01	02 03 04 05 06 07 08 09 0A	М	15 bytes
			0B 0C 0D 0E 0F		

B.2.4 DF _{SUB_TEST} (Test DF under DF TEST)

Identifier: '5F10'

B.2.4.1 EF_{TAA} (Test EF)



	Identifier: '4F10'	Str	ucture: transparent	Ма	ndatory
	File size: 3 bytes Update activity: low				
		Access Condition	ons:		
	READ		ALWAYS		
	UPDAT	Έ	ALWAYS		
	DEACT	IVATE	ALWAYS		
	ACTIVA	ATE	ALWAYS		
				1	
Bytes	Description		Default Value	M/O	Length
1 to 3	Test Data		AA AA AA	М	3 bytes

B.2.5 DF_{ARR1} (DF Access Rule Reference 1)

Identifier: '5F11'

Access Conditions: Record 1 of EFARR (0x2F06 under the MF and 0x6F06 under ADF1).

B.2.5.1 EF_{TAR1T} (Transparent Access Rule 1 Test EF)



	Identifier: '4F11'	Structure: transparent	Ma	ndatory
	File size: 3 bytes	Update activity: low		
Access Conditions: Record 1 of EF _{ARR}				
Bytes	Description	Default Value	M/O	Length
1 to 3	Test Data	AA AA AA	М	3 bytes

B.2.6 DF_{ARR2} (DF Access Rule Reference 2)

Identifier: '5F12'

Access Conditions: Record 2 of EFARR (0x2F06 under the MF and 0x6F06 under ADF1).



B.2.6.1 EF_{TAR2T} (Transparent Access Rule 2 Test EF)



	Identifier: '4F12'	Structure: transparent	Ma	ndatory	
	File size: 3 bytes	Update activity: low			
	Access Conditions: Record 2 of EF _{ARR}				
Bytes	Description	Default Value	M/O	Length	
1 to 3	Test Data	AA AA AA	М	3 bytes	

B.2.7 DF_{ARR3} (DF Access Rule Reference 3)

Identifier: '5F13'

Access Conditions: Record 3 of EFARR (0x2F06 under the MF and 0x6F06 under ADF1).

MF		
	DF TEST	
		DF ARR3

B.2.7.1 EF_{TAR3T} (Transparent Access Rule 3 Test EF)

MF 	DF TEST		
		DF ARR3	
			EF TAR3

	Identifier: '4F13'	Structure: transparent	Ма	ndatory	
	File size: 3 bytes	Update activity: low			
	Access Conditions: Record 3 of EF _{ARR}				
Bytes Description Default Value M/O Length					
1 to 3	Test Data	AA AA AA	М	3 bytes	

B.2.8 DF_{ARR4} (DF Access Rule Reference 4)

Identifier: '5F14'

Access Conditions: Record 4 of EFARR (0x2F06 under the MF and 0x6F06 under ADF1).



B.2.8.1 EF_{TAR4T} (Transparent Access Rule 4 Test EF)



	Identifier: '4F14'	Structure: transparent	Ма	ndatory
	File size: 3 bytes	Update activity: low		
Access Conditions: Record 4 of EF _{ARR}				
Bytes	Description	Default Value	M/O	Length
1 to 3	Test Data	AA AA AA	М	3 bytes

B.2.9 DF_{ARR5} (DF Access Rule Reference 5)

Identifier: '5F15'

Access Conditions: Record 5 of EFARR (0x2F06 under the MF and 0x6F06 under ADF1).

VIF		
	DF TEST	
		DF ARR5

B.2.9.1 EF_{TAR5T} (Transparent Access Rule 5 Test EF)

MF DF TES ⁻	Γ	
	DF ARR5	
		EF TAR5

I	dentifier: '4F15'	Structure: transparent	Ma	ndatory	
	File size: 3 bytes	Update activ	ity: low		
	Access Conditions: Record 5 of EF _{ARR}				
Bytes Description Default Value M/O				Length	
1 to 3	Test Data	AA AA AA M 3 bytes			

B.3 First application dedicated files system ADF1

The prepersonalization of UICC cards shall contain ADF1.

Figure B.2 shows the additional prepersonalization, the file system and files' content under ADF1 system.

All the files are defined as in the UICC file system server.

B.3.1 DF_{TELECOM}

Identifier: '7F10'

ADF1 DF TELECOM

B.3.4.1 EF_{SUME} (EF SetUpMenu)

ADF1		
	DF TELECOM	
		_ EF SUME

	Identifier: '6F54'	Stru	Structure: transparent		ndatory		
	File size: 17 bytes		Update activity	: low			
	Access Conditions:						
	READ		ALWAYS				
	UPDAT	Έ	ALWAYS				
	DEACT	IVATE	ALWAYS				
	ACTIVA	ATE	ALWAYS				
Bytes	Description		efault Value	M/O	Length		
1 to 17		85 09 55 49 43 FF FF FF FF	43 20 54 45 53 54 FF FF	М	17 bytes		

B.3.4.2 EF_{ARR} (UICC Test Access Rules EF)

MF EF ARR

	Identifier: '6F06'	Str	ucture: Linear fixed	0	ptional		
	SFI : none						
	Record length: n bytes		Update activity	y: low			
	Access Conditions:						
	READ		ALWAYS				
	UPDATI	E	ALWAYS				
	DEACTI	VATE	ALWAYS				
	ACTIVA	TE	ALWAYS				
Bytes	Description	[Default Value	M/O	Length		
1 to n	Access Rule 1	Always	s for all commands	М	n bytes		
n+1 to 2n	Access Rule 2	Never for all commands		М	n bytes		
2n+1 to 3n	Access Rule 3	Global PIN1 & ADM1 for all commands		М	n bytes		
3n+1 to 4n	Access Rule 4	Global PIN1	ADM1 for all commands	М	n bytes		
4n+1 to 5n	Access Rule 5	Local PI	N1 for all commands	М	n bytes		

Access rules definition:

	Delete selft	Terminat card Usage/ Terminate DF	Activate File	Deactivate File	Create File (DF creation)	Create File (EF creation)	Delete File (child)	
Record nb	Delete File	Terminate EF	Activate File	Deactivate File	Write Binary, Write Record, Append Record	Update Binary, Update Record, Erase Binary	Read binary, Read Record, Search Binary, Search Record	Increase, resize
1	Always	Always	Always	Always	Always	Always	Always	Always
2	Never	Never	Never	Never	Never	Never	Never	Never
3	Global PIN1	Global PIN1	Global PIN1	Global PIN1	Global PIN1	Global PIN1	Global PIN1	Global PIN1
	& ADM1	& ADM1	& ADM1	& ADM1	& ADM1	& ADM1	& ADM1	& ADM1
4	Global PIN1 ADM1	Global PIN1 ADM1	Global PIN1 ADM1	Global PIN1 ADM1	Global PIN1 ADM1	Global PIN1 ADM1	Global PIN1 ADM1	Global PIN1 ADM1
5	Local PIN1	Local PIN1	Local PIN1	Local PIN1	Local PIN1	Local PIN1	Local PIN1	Local PIN1

B.4 Second application dedicated files system ADF2

The prepersonalization of UICC cards shall contain ADF2.

Figure B.3 shows the additional prepersonalization, the file system and files' content under ADF2 system.

B.4.1 EF_{UICC} (UICC Test EF)

ADF2 EF UICC

	Identifier: '2FE4'	Structure: transparent		Ma	ndatory
	File size: 3 bytes		Update activity: low		
		Access Condition	ons:		
	READ		ALWAYS		
	UPDAT	Έ	ALWAYS		
	DEACT	IVATE	ALWAYS		
	ACTIVA	ATE	ALWAYS		
Bytes	Description		Default Value	M/O	Length
1 to 3	Test Data		CC CC CC	М	3 bytes

B.4.2 DF_{TEST} (1st Test DF under ADF2)

Identifier: '7F4A'	
ADF2	DF TEST

B.4.2.1 DF_{SUB_TEST} (1st DF under DF_TEST)

Identifier: '5F10'

B.4.2.1.1EF_{TAA} (Test EF)

	Identifier: '4F10'	Stru	Structure: transparent Mandatory		
	File size: 3 bytes		Update activity	y: low	
		Access Condition	ons:		
	READ		ALWAYS		
	UPDAT	E	ALWAYS		
	DEACT	IVATE	ALWAYS		
	ACTIVA	TE	ALWAYS		
Bytes	Description		Default Value	M/O	Length
1 to 3	Test Data		AA AA AA	M	3 bytes

B.4.3 DF_{ADF2} (2nd Test DF under ADF2)

Identifier: '7F4B'

Annex C (normative): Test file description

Every test source is written in $java^{TM}$ and shall use methods defined in Annex D interfaces to communicate with the card, or to check status word or received data.

In order to be more readable, data specified as method string parameters shall be presented in 4 blocks of 4 bytes per line. Every block is separated by a space character. Every string line is appended to previous one and shall be aligned. An example is provided in Annex D.

Every test file shall start with a call to reset() method.

Except otherwise stated, each reset() method shall be followed by a profile download.

Annex D (normative): uicc.test.util package, Uicc interfaces and testing script example

See attached files contained in $ts_102268v070000p0.zip$:

- Annex_D_UiccTestUtil.zip
- Annex_D_UiccInterfaces.zip
- Annex_D_Example.zip

Annex E (normative): Test Area files

See attached file contained in ts_102268v070000p0.zip:

Annex_E_SourceCode.zip

Annex F (informative): Bibliography

- ISO/IEC 7816-3 (2006): "Identification cards Integrated circuit cards Part 3: Cards with contacts Electrical interface and transmission protocols".
- ETSI TS 102 225: "Smart Cards; Secured packet structure for UICC based applications (Release 6)".
- ETSI TS 102 240: "Smart Cards; UICC Application Programming Interface and Loader Requirements; Service description; (Release 6)".
- ETSI TS 151 011: "Digital cellular telecommunications system (Phase 2+); Specification of the Subscriber Identity Module Mobile Equipment (SIM-ME) interface (3GPP TS 51.011 Release 4)".

Annex G (informative): Change history

The table below indicates all changes that have been made to the present document since first publication.

	Change history							
Date	SCP #	TDoc	CR	Rev	Cat	Subject/Comment	Old	New
2007-01	29	SCP-070014				Initial publication		6.0.0
2013-01	58	SCP(13)000019	005	-	F	Correction of the test case number 2 of the Test Area Reference: Cre_Reg_Evtr	6.0.0	6.1.0
2013-04	59	SCP(13)000064	004	-	F	Improvement of results reporting	6.0.0	6.1.0
2013-07	60	SCP(13)000124	006	-	F	CR 102 268 R6 #006: Correction of test coverage for test case 5.2.3.25	6.1.0	6.2.0
2013-10	61	SCP(13)000204	007	-	F	CR 102 268 R6 #007: Correction of test coverage for TC 5.5.9.3	6.1.0	6.2.0
2013-10	61	SCP(13)000203	010	-	F	CR 102 268 R6 #010: Addition of new test applet for TC 5.2.5.13	6.1.0	6.2.0
2014-02	62	SCP(14)000010	012	-	F	CR 102 268 R6 #012: Correction of test case 5.2.8.18 ID4/5/6 to correct MF to ADF1	6.1.0	6.2.0
2014-02	62	SCP(14)000012	800	1	F	CR 102 268 R6 #008r1: Modification of conformance requirement structure for TC 5.2.10.25	6.1.0	6.2.0
2014-02	62	SCP(14)000011	011	-	F	CR 102 268 R6 #011: Correction of test case 5.1.1.3	6.1.0	6.2.0
2014-06	64	SCP(14)000146	013	-	F	CR 102 268 R6 #013: Correction of restore functionality of EF_CARU content	6.1.0	6.2.0
2014-12	66	SCP(14)000293	015	-	F	CR 102 268 R6 #015: Adjust TC 5.2.10.25 to specification	6.1.0	6.2.0
2014-12	66	SCP(14)000295r1	017	1	F	CR 102 268 R6 #017r1: Step deleted from 5.2.16.5	6.1.0	6.2.0
2014-12	66	SCP(14)000296	018	-	F	CR 102 268 R6 #018: Bit setting for COMPREHENSION-TLV	6.1.0	6.2.0
2014-12	66	SCP(14)000292	014	-	F	CR 102 268 R6 #014: Correction of test Java file for TC 5.2.5.13	6.1.0	6.2.0
2014-12	66	SCP(14)000294	016	-	F	CR 102 268 R6 #016: Step added to TC 5.2.10.12	6.1.0	6.2.0
2015-02	67	SCP(15)000009	019	-	F	CR 102 268 R6 #019: Change in the Terminal Profile to avoid proactive command pending	6.1.0	6.2.0
2015-02	67	SCP(15)000010	020	-	F	CR 102 268 R6 #020: Missing SW check	6.1.0	6.2.0
2015-02	67	SCP(15)000011	021	-	F	CR 102 268 R6 #021: No exception due to large buffer	6.1.0	6.2.0
2012-12	57	SCP(12)000230r1	001	-	D	Alignment of core spec and test spec with respect to the method uicc.system.HandlerBuilder.buildTLVHandler()	6.2.0	7.0.0
2013-01	58	SCP(13)000017	002	-	F	Additional files for the test file system	6.2.0	7.0.0
2013-01	58	SCP(13)000018	003	-	С	Update of the reference section	6.2.0	7.0.0

History

Document history						
V7.0.0	April 2015	Publication				