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Personal identification — ISO-compliant driving licence —

Part 4: Test methods

AMENDMENT 1: Test methods for compact encoding

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and security devices for personal identification*.

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Part 4:
Test methods

AMENDMENT 1: Test methods for compact encoding

Clause 2 Normative references

Add the date of publication to the reference to ISO/IEC 18013-2 as follows:

ISO/IEC 18013-2:2020

Replace all the occurrences of ISO/IEC 18013-2 in the document to the dated version.

Clause 4

Add the following abbreviated term after CA

CE compact encoding

Subclause 6.2.2.1

Replace

"One IUT is defined as an IDL with SE for SIC (see ISO/IEC 18013-2:—, Annex C)"

by

"One IUT is defined as an IDL with SE for SIC (see ISO/IEC 18013-2:2020, Annex C) or an IDL with CE (see ISO/IEC 18013-2:2020, Annex B) "

Subclause 6.3.1.3

Replace the full text by

"All equipment described in Annexes A to D pertinent to the machine-readable technology supported by the IUT shall be available."

Subclause 7.1

Replace the second sentence by

"Test requirements for Commands and LDS tests conformity are defined in Annexes A to D."

Subclause 7.3

Add the following subclause:

"7.3.3 Compact encoding (CE)

Test case specifications for CE cover are as follows:

— Data structure tests for CE and commands tests (applicable to CE on SIC). The tests shall be carried out as specified in Annex D."

Subclause A.3.2.19

In row "References", replace

"ISO/IEC 18013-2:—, A.5.1"

by "ISO/IEC 18013-2: 2020, A.4.1".

Subclause A.3.2.20

In row "References", replace

ISO/IEC 18013-2:—, A.5.1

by

ISO/IEC 18013-2: 2020, A.4.1

Subclause A.3.2.21

In row "References", replace " ISO/IEC 18013-2:—, A.5.1"

by

"ISO/IEC 18013-2: 2020, A.4.1

Add following new Annex D after Annex C.

Annex D
(normative)

Test case specification for Compact Encoding (CE)

D.1 General

This annex specifies the test cases for CE.

D.2 General test requirements

D.2.1 Preconditions for testing

The tests in this annex require a fully personalized IDL. This means that all mandatory data groups shall be present. This annex tests all mandatory and optional data groups.

All tests are mandatory unless marked as optional or conditional.

D.2.2 Test setup

For setting up these tests, any read device able to read all data at the same time can be used.

D.2.3 Implementation conformance statement

In order to set up the tests properly, Tables D.1 and D.2 shall be completed.

The ISO/IEC 18013-2 and ISO/IEC 18013-3 specifications define several optional elements that an IDL can support.

Since these elements are optional, it is not possible to define the corresponding tests as mandatory for each IDL. Therefore, this document specifies a set of profiles. Each profile covers a specific optional element. A tested IDL shall be assigned to the supported profiles in the ICS, and a test shall only be performed if the IDL supports this profile.

Table D.1 — Implementation conformance statement

Profile	Information for test setup	Applicable (YES or NO)
SIC	Contact ICC or PICC storage media	
BAP	Basic Access Protection	
PACE	Password Authenticated Connection Establishment	
NO-SIC	All technologies excluding ICs	
DG2	IDL contains Data Group 2	
DG3	IDL contains Data Group 3	
DG4	IDL contains Data Group 4	
DG7	IDL contains Data Group 7	
DG11	IDL contains Data Group 11	
SOD	IDL contains SOD	

Table D.1 *(continued)*

Profile	Information for test setup	Applicable (YES or NO)
SOD2	IDL contains DG.SOD.2, but no DG.SOD.3	
SOD23	IDL contains DG.SOD.2 and DG.SOD.3	
NMA	IDL contains Data Group 12	

Table D.2 — Configuration information

Supported profile	Configuration information
DG11	Indicate whether DG11 is a type 1 or type 2 data group. If DG11 is a type 2 data group, indicate the length in bytes of the data-group.
SOD, SOD2 not supported, SOD23 not supported	Provide the public key value and the curve identifier for the verification of the signature in the SOD. For allowed values for the curve identifier, see ISO/IEC 18013-3:2017, Table 3.
SOD, SOD2, SOD23 not supported	Provide the curve identifier for the verification of the signature in the SOD. For allowed values for the curve identifier, see ISO/IEC 18013-3:2017, Table 3.

D.3 Test layer CE

D.3.1 Test unit CE_FILE — Compact encoding (CE) file structure tests

D.3.1.1 Test case CE_FILE_001

Test Case-ID	CE_FILE_001
Purpose	This test checks the template tag of the encoded LDS element.
Version	0.2
References	ISO/IEC 18013-2:2020, Annex B
Profile	SIC
Preconditions	1. Encoded EF.CE object in binary format (as read from the IDL)
Test scenario	1. Check the very first byte of the EF.CE element
Expected results	1. First byte shall be '53'

D.3.1.2 Test case CE_FILE_002

Test Case-ID	CE_FILE_002
Purpose	This test checks the absence of EF.COM for CE
Version	0.2
References	ISO/IEC 18013-2:2020, Annex B
Profile	SIC
Preconditions	1. Encoded LDS Data in binary format (as read from the IDL)
Test scenario	1. Check the presence of EF.COM
Expected results	1. EF.COM shall not be present

D.3.1.3 Test case CE_FILE_003

Test Case-ID	CE_FILE_003
Purpose	This test checks the file structure for CE
Version	0.2
References	ISO/IEC 18013-2:2020, Annex B
Profile	
Preconditions	1. Encoded CE Constructed Data Object in binary format (as read from the IDL; without the SIC template tag, if applicable)
Test scenario	1. Check the first byte of the CE constructed data object 2. Check the last byte of the CE constructed data object
Expected results	1. The first byte shall be 'A0' 2. The last byte shall be the End of File Delimiter 'B6'

D.3.2 Test unit CE_HEADER — Compact encoding (CE) header tests

D.3.2.1 Test case CE_HEADER_001

Test Case-ID	CE_HEADER_001
Purpose	This test checks the Application Identifier referred by the header element
Version	0.2
References	ISO/IEC 18013-2:2020, Annex B
Profile	NO-SIC
Preconditions	1. Encoded LDS Data in binary format (as read from the IDL)
Test scenario	1. Check the AID bytes (first 7 bytes) of the Header element
Expected results	1. AID shall be 'A0 00 00 02 48 01 00'

D.3.2.2 Test Case CE_HEADER_002

Test Case-ID	CE_HEADER_002
Purpose	This test checks the Application Identifier referred by the header element
Version	0.2
References	ISO/IEC 18013-2:2020, Annex B
Profile	SIC
Preconditions	1. Encoded LDS Data in binary format (as read from the IDL)
Test Scenario	1. Check the AID bytes (first 7 bytes) of the Header element
Expected Results	1. AID shall be 'A0 00 00 02 48 03 00'

D.3.2.3 Test Case CE_HEADER_003

Test Case-ID	CE_HEADER_003
Purpose	This test checks the Version referred by the header element
Version	0.2
References	ISO/IEC 18013-2:2020, Annex B
Profile	

Preconditions	1. Encoded LDS Data in binary format (as read from the IDL)
Test Scenario	1. Check the number of bytes of the Version 2. Check the first byte of the Version of the Header element 3. Check the second byte of the Version of the Header element
Expected Results	1. The number of bytes is two 2. The first byte of the Version shall be '01' 3. The second byte of the Version shall contain a valid BCD encoded number

D.3.2.4 Test Case CE_HEADER_004

Test Case-ID	CE_HEADER_004
Purpose	This test checks the Length encoded in the header element
Version	0.2
References	ISO/IEC 18013-2:2020, Annex B
Profile	
Preconditions	1. Encoded LDS Data in binary format (as read from the IDL)
Test Scenario	1. Analyze the encoding of the Length bytes in the Header Element 2. Verify the length of the data file
Expected Results	1. The Length shall contain a valid length encoding according to ASN.1 encoding rules 2. The encoded length shall equal the total number of bytes from (and including) the data group delimiter between the header and Data Group 1, up to and including the last character of the LDS (i.e. the end of file delimiter)

D.3.3 Test Unit CE_DG1 – Compact encoding (CE) DG1 tests

D.3.3.1 Test Case CE_DG1_001

Test Case-ID	CE_DG1_001
Purpose	This test checks the encoded DG1 for CE according to Type 1 Data Group encoding rules
Version	0.2
References	ISO/IEC 18013-2:2020, Annex B ISO/IEC 8859-1
Profile	
Preconditions	1. Encoded LDS Data in binary format (as read from the IDL)
Test Scenario	1. Check the byte following the length encoding in the header, i.e. the byte preceding Data Group 1.
Expected Results	1. The byte shall be 'D7' ("×")

D.3.3.2 Test Case CE_DG1_002

Test Case-ID	CE_DG1_002
Purpose	This test checks the Field Delimiters of DG1 for CE according to Type 1 Data Group encoding rules
Version	0.2
References	ISO/IEC 18013-2:2020, Annex B ISO/IEC 8859-1
Profile	
Preconditions	1. Encoded LDS Data in binary format (as read from the IDL)
Test Scenario	1. Check the number of Field Delimiters in DG1
Expected Results	1. The number of Field Delimiters shall be 8

D.3.3.3 Test Case CE_DG1_003

Test Case-ID	CE_DG1_003
Purpose	This test checks the encoding of the Family Name referred by the DG1 element
Version	0.2
References	ISO/IEC 18013-2:2020 ISO/IEC 8859-1
Profile	
Preconditions	1. Encoded LDS Data in binary format (as read from the IDL)
Test Scenario	1. Search for DG1 2. Verify the Family Name field length 3. Verify the Family Name.
Expected Results	1. DG1 shall be present. 2. The number of bytes shall not exceed 36 3. Family Name shall not contain numeric characters

D.3.3.4 Test Case CE_DG1_004

Test Case-ID	CE_DG1_004
Purpose	This test checks the encoding of the Given Name referred by the DG1 element
Version	0.2
References	ISO/IEC 18013-2:2020 ISO/IEC 8859-1
Profile	
Preconditions	1. Encoded LDS Data in binary format (as read from the IDL)
Test Scenario	1. Search for DG1 2. Verify the Given Name field length 3. Verify the Given Name.
Expected Results	1. DG1 shall be present. 2. The number of bytes shall not exceed 36 3. Given Name shall not contain numeric characters