ISO/IEC JTC1/SC17 2010-12-23
Cards and personal identification

**ISO/IEC JTC1/SC17**

**DOCUMENT TYPE :** TEXT FOR FDIS BALLOT

**TITLE:** Notification that – ISO/IEC 14443-4:2008/FDAM 1:2010(E) - Identification cards - Contactless integrated circuit cards - Proximity cards - Part 4: Transmission protocol Amendment 1: Exchange of additional parameters – has been posted to the ISO server for FDIS ballot

**BACKWARD POINTER:** N 3707, N 3708, N 3779, N 3844, N 3845, N 3879, N 3929, N 3930 and N 4043.

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ISO/IEC Form 10 - Electronic

| | **Explanatory Report** | **ISO/IEC FDIS** |
|---|---|---|
| | ISO/IEC JTC 1/SC17<br><br>Will supersede:<br>SC 17 N 3930 | Secretariat: APACS for BSI |

This form should be sent to ITTF, together with the committee draft, by the secretariat of the joint technical committee or sub-committee concerned

The accompanying document is submitted for circulation to member body vote as a FDIS, following consensus of the P-members of the committee obtained on:

| | |
|---|---|
| | at the {DATE, LOCATION} meeting of ISO/IEC JTC 1/SC {YY}<br>(See resolution number {XX} in document SC {YY} N {XXXXX}) |
| ✓ | by postal ballot initiated on: 2010-05-29 |

| | |
|---|---|
| P-members in favour: | Armenia (SARM), Austria (ASI), Belgium (NBN), China (SAC), Czech Republic (UNMZ), Denmark (DS), France (AFNOR), Germany (DIN), India (BIS), Italy (UNI), Japan (JISC), Korea, Republic of (KATS), Netherlands (NEN), Norway (SN), Poland (PKN), Russian Federation (GOST R), Singapore (SPRING SG), Switzerland (SNV), United Kingdom (BSI), USA (ANSI). |
| P-members voting against: | |
| P-members abstaining: | Australia (SA), Canada (SCC), Finland (SFS), Israel (SII), Kenya (KEBS), Portugal (IPQ), Slovakia (SUTN), South Africa (SABS), Spain (AENOR), Sweden (SIS) |
| P-members who did not vote: | |

Remarks:

Disposition of comments to be found in 17n4100.

Project: 54823

I hereby confirm that this draft meets the requirements of part 2 of the IEC/ISO Directives

| | |
|---|---|
| Date:<br>2010-12-23 | Name/Signature of the secretary:<br>Chris Starr |

**ISO/IEC JTC 1/SC 17**

Date: 2010-09-30

**ISO/IEC 14443-4:2008/FDAM 1:2010(E)**

ISO/IEC JTC 1/SC 17/WG 8

Secretariat: DIN

# Identification cards — Contactless integrated circuit cards - Proximity cards — Part 4: Transmission protocol

## Amendment 1: Exchange of additional parameters

*Cartes d'identification — Cartes à circuit intégré - Cartes de proximité — Partie 4: Protocole de transmission*

Amendement 1: Echange de paramètres additionnels

Document type: International Standard
Document subtype: Amendment
Document stage: (50) Approval
Document language: E

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# Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

Amendment 1 to ISO/IEC 14443-4:2008 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and personal identification*.

# Identification cards — Contactless integrated circuit cards - Proximity cards — Part 4: Transmission protocol

## Amendment 1: Exchange of additional parameters

*Page 14, Clause 7*

Following the first list add the following paragraph:

"A mechanism is provided in order to introduce additional protocol functions that may be defined from time to time in this standard or in other standards that use this standard as their foundation"

*Page 15, 7.1.1.1*

Replace the third dash with:

"S-block used to exchange control information between the PCD and the PICC. The support of the S(PARAMETERS) block is optional for PCDs and PICCs. Three different types of S-blocks are defined:

a) "Waiting time extension" containing a 1 byte long INF field,

b) "DESELECT" containing no INF field,

c) "PARAMETERS" containing a n-byte long INF field with n ≥ 0.

NOTE FSD and FSC should be large enough to contain the expected S(PARAMETERS) blocks."

Replace the last paragraph with:

"A PICC or PCD setting b6 <> (0)b of an I-block is not compliant with this standard. A PICC or PCD setting b2 <> (1)b of an R-block is not compliant with this standard. A PICC or PCD setting b1 <> (0)b of an S-block is not compliant with this standard."

Replace Figure 17 with:"

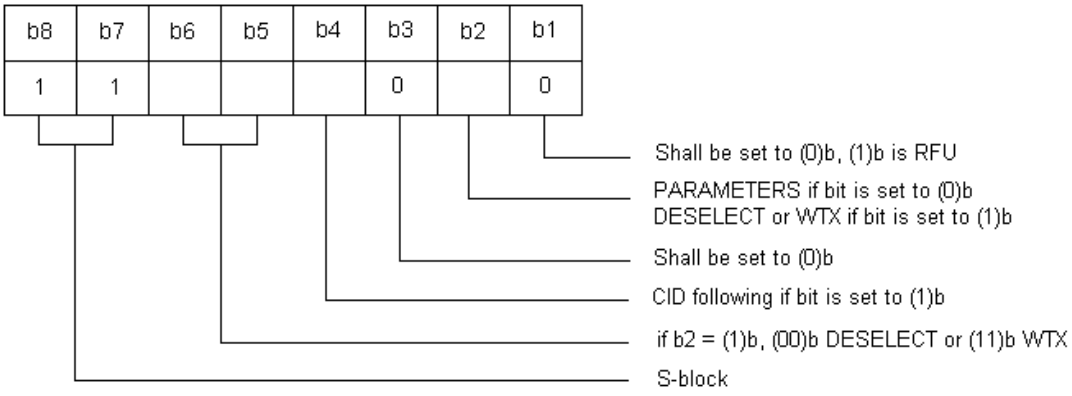


**Figure 17 — Coding of S-block PCB**

"

*Page 18; Clause 7.2*

Replace the 2nd paragraph with:

"FWT is calculated by the following formula:

FWT = (256 x 16 / *fc*) x $2^{FWI}$

where the value of FWI has the range from 0 to 14 and the value of 15 is RFU.

The default value of FWI is 4 (which gives a FWT value of ~ 4,8 ms) in the two following cases:

— for Type A, if TB(1) is omitted,

— for S(PARAMETERS) and S(DESELECT) blocks."

*Page 20 Clause, 7.5*

Create a new 7.5.1 and renumber all subsequent sub clauses:

"**7.5.1 S(PARAMETERS) blocks**

After the activation sequence, the PCD may send at any time a first S(PARAMETERS) block with or without INF field to check if S(PARAMETERS) blocks are supported by the PICC

This first PCD S(PARAMETERS) block and the PICC answer (if the PICC supports S(PARAMETERS) blocks) may contain information indicating the support of different application protocol types and/or other communication parameters.

The content of the S(PARAMETERS) INF field is defined in the relevant part of ISO/IEC 14443 and shall comply with the BER-TLV encoding rules for the context-specific class according to ISO/IEC 7816-4:2005"

*Page 22 Clause, 7.5.4.2*(renumbered to 7.5.5.2)

Replace rule 4 with:

"Rule 4. When an invalid block is received or a FWT time-out occurs, an R(NAK) block shall be sent (except in the case of PICC chaining or S(DESELECT) or S(PARAMETERS))."

Replace rule 8 with:

"Rule 8. If the S(DESELECT)/S(PARAMETERS) request is not answered by an error-free S(DESELECT)/S(PARAMETERS) response the S(DESELECT)/S(PARAMETERS) request may be retransmitted.

In case of not receiving an S(DESELECT) response after an S(DESELECT) request the PICC may be ignored."

*Page 29; Annex B*

Add the following scenario after scenario 9:

"**B2.6 Exchange of additional parameters**

Scenario Amd.1.1

| | **Comment** | **Block No. (0)** | **PCD** | | **PICC** | **Block No. (1)** | **Comment** |
|---|---|---|---|---|---|---|---|
| 1. | rule 1 | | $I(0)_0$ | ===> | | 0 | rule D |
| 2. | rule B | 1 | | <=== | $I(0)_0$ | | rule 10 |
| 3. | | S(PARAMETERS) request | | ===> | | | |
| 4. | | | | <=== | S(PARAMETERS) response | | rule 3 |
| 5. | | | $I(0)_1$ | ===> | | 1 | rule D |
| 6. | rule B | 0 | | <=== | $I(0)_1$ | | rule 10 |

"

*Page 34; Annex B*

Add the following scenario after scenario 24:

"Scenario Amd.1.2:

| | **Comment** | **Block No. (0)** | **PCD** | | **PICC** | **Block No. (1)** | **Comment** |
|---|---|---|---|---|---|---|---|
| 1. | rule 1 | | $I(0)_0$ | ===> | | 0 | rule D |
| 2. | rule B | 1 | | <=== | $I(0)_0$ | | rule 10 |
| 3. | | S(PARAMETERS) request | | =≠=> | | | |
| 4. | time-out | | | <= = | | | |
| 5. | rule 8 | S(PARAMETERS) request | | ===> | | | |
| 6. | | | | <=== | S(PARAMETERS) response | | rule 3 |
| 7. | | | $I(0)_1$ | ===> | | 1 | rule D |
| 8. | rule B | 0 | | <=== | $I(0)_1$ | | rule 10 |

"

*Page 36;*

*Replace Table C.1 with:*

"

Table C.1 — Block and frame coding

| Bit | I-block PCB | R-block PCB | S-block PCB | | | REQB / WUPB | Slot-MARKER | SELECT | ATTRIB | HLTA | HLTB | RATS | PPS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | DESELECT | WTX | PARAMETERS | | | | | | | | |
| b8 | 0 | 1 | 1 | | | 0 | X | 1 | 0 | 0 | 0 | 1 | 1 |
| b7 | 0 | 0 | 1 | | | 0 | X | 0 | 0 | 1 | 1 | 1 | 1 |
| b6 | 0 (1 is RFU) | 1 | 0 | 1 | 0 | 0 | X | 0 | 0 | 0 | 0 | 1 | 0 |
| b5 | Chaining | ACK/NAK | 0 | 1 | 0 | 0 | X | 1 | 1 | 1 | 1 | 0 | 1 |
| b4 | CID | CID | CID | | | 0 | 0 | X | 1 | 0 | 0 | 0 | X |
| b3 | NAD | 0 (no NAD) | 0 (no NAD) | | | 1 | 1 | X | 1 | 0 | 0 | 0 | X |
| b2 | 1 | 1 (0 is RFU) | 1 | | 0 | 0 | 0 | X | 0 | 0 | 0 | 0 | X |
| b1 | Block number | Block number | 0 (1 is RFU) | | | 1 | 1 | X | 1 | 0 | 0 | 0 | X |

"