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

C:\Documents and Settings\jcaruana\My Documents\STANDARDIZATION DRIVE\EDITOR WG8 ISO 14443-4 AMD1\FDAM14443-4_2008_AMD1.doc STD Version 2.1c2

Foreword

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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:"

b8	b7	b6	b5	b4	b3	b2	b1
1	1				0		0

Shall be set to (0)b, (1)b is RFU

PARAMETERS if bit is set to (0)b
DESELECT or WTX if bit is set to (1)b

Shall be set to (0)b

CID following if bit is set to (1)b

if b2 = (0)b, shall be set to (00)b
if b2 = (1)b, (00)b DESELECT or (11)b WTX

S-block

Figure 17 — Coding of S-block PCB

"Page 18; Clause 7.2

Replace the 2nd paragraph with:"

"FWT is calculated by the following formula:

$$FWT = (256 \times 16 / fc) \times 2^{FWI}$$

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 DESELECT	S-block PCB WTX	S-block PCB PARAMETERS	REQB / WUPB	Slot-MARKER	SELECT	ATTRIB	HLTA	HLTB	RATS	PPS
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