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Identification cards — Contactless integrated circuit cards — Proximity cards — Part 3: Initialization and anticollision

AMENDMENT 3
Alternating between PICC and PCD functionalities

Cartes d´identification — Cartes à circuit intégré sans contact — Cartes de proximité — Partie 3: Initialisation et anticollision

AMENDEMENT 3
Alternance entre fonctionnalités PICC et PCD

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Amendment 3 to ISO/IEC 14443-3:2011 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 3: Initialization and anticollision

Amendment 3: Alternating between PICC and PCD functionalities

Page 1, Clause 1

Add new bullet after last bullet:

"

— optional means to allow a device to alternate between the functions of a PICC and a PCD to communicate with a PCD or a PICC, respectively.

"

Replace last paragraph by:

"

This part of ISO/IEC 14443 is applicable to PICCs of Type A and of Type B and PCDs (as described in ISO/IEC 14443-2) and to PXDs.

"

Page 2, Clause 3

Add new definitions:

"

3.7

PICC mode

PXD state in which PICC requirements are fulfilled

3.8

PCD mode

PXD state in which PCD requirements are fulfilled

"

Page 2, Clause 4

Add new symbols and abbreviated terms:

"

PXD Proximity eXtended Device

t_{cyc} maximum automatic mode alternation cycle time

t_{diff} minimum time difference of PICC mode durations

"

Page 5, Clause 5

Move existing clause 5 into new sub clause 5.2

Create new clause 5 and sub clause 5.1:

"

5 Initial dialogs

5.1 Alternating PICC and PCD support

A proximity extended device (PXD) shall alternately support PICC requirements (PICC mode, either Type A or Type B) and PCD requirements (PCD mode, Type A and Type B).

The alternation between the PICC mode and the PCD mode may be manually selected or automatic.

The PICC mode and the PCD mode are defined as PICC and PCD in ISO/IEC 14443.

The automatic mode alternation is defined as follows:

— the PXD shall alternate between the PICC mode and the PCD mode with maximum cycle time t_{cyc} = 1 s and shall stay in PICC mode (ready for receiving REQA/WUPA or REQB/WUPB commands, except for the first 5 ms) longer than in PCD mode (generating operating field), when neither a PICC nor a PCD is in close proximity,

— the PXD shall randomly set the PICC mode duration for each cycle to a value chosen from a set of at least 2 different values differing by at least for t_{diff} = 5 ms,

— in PICC mode, after reception of a valid REQA/WUPA or REQB/WUPB command, the PXD shall not go in PCD mode before a POWER OFF state,

— when leaving the PCD mode after processing of a PICC, the PXD shall resume its automatic mode alternation with the PICC mode first.

NOTE 1 The PXD may check the presence of external operating field to decide not to enter PCD mode, i.e. to stay in PICC mode for a further random PICC mode duration.

NOTE 2 The detection of the removal of a PICC (or a PXD in PICC mode) could be done by:

— either a failure of a presence check method,

— or no response to another presence check sequence made of:

— an S(DESELECT) command,

— repeated WUPA/ WUPB, anticollision and HLTA/HLTB commands

with operating field not switched off in between (to keep the same UID/PUPI and to avoid PXD going in PCD mode).

"