TECHNICAL REPORT

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Identification cards — Contactless integrated circuit cards — Proximity cards — Multiple PICCs in a single PCD field

Cartes d'identification — Cartes à circuit(s) intégré(s) sans contact — Cartes de proximité — Multiples PICCs dans le champ d'un seul PCD

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Foreword

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In exceptional circumstances, when the joint technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide to publish a Technical Report. A Technical Report is entirely informative in nature and shall be subject to review every five years in the same manner as an International Standard.

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ISO/IEC TR 18268 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and personal identification*.

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Introduction

Experience from the field has shown that the presence of multiple PICCs in a field can have unexpected results in terms of all PICCs being seen by the PCD and the quality of the communications. This Technical Report seeks to assemble the collective knowledge of the engineering principles involved.

This Technical Report is relevant to the standards listed in the Bibliography and an understanding of these is useful in placing this Technical Report in context.

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Identification cards — Contactless integrated circuit cards — Proximity cards — Multiple PICCs in a single PCD field

1 Scope

This Technical Report presents a collation of industry experience of technical issues resulting from the presence of multiple PICCs in the field of a PCD. It describes how resonance frequencies may shift, how individual PICCs may see a reduced field strength, how multiple PICCs load the PCD, how they may change the local modulation signal and how PICCs should manage their identities to aid support of simultaneous usage. Scenarios for electronic passports with multiple visas and wallets containing multi-industry cards are explored.

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