INTERNATIONAL STANDARD

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Information technology — Mobile item identification and management — Consumer privacy-protection protocol for Mobile RFID services

Technologies de l'information — Gestion et identification d'élément mobile — Protocole de protection de la vie privée de l'utilisateur pour les services RFID mobiles

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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.

ISO/IEC 29176 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology,* Subcommittee SC 31, *Automatic identification and data capture techniques*.

Introduction

There are many possible concerns regarding the authenticity and integrity of mobile radio frequency identification (Mobile RFID) systems. For example, an unauthorized interrogator can easily read a UII (Unique Item Identifier), TID (Tag Identifier), and the User memory banks of ISO/IEC 18000-6 Type C tags and ISO/IEC 18000-3 MODE 3 tags because there is no read-protection for these memory banks. In this case, the unauthorized interrogator could gather the product information by analysing the UII coding rules. Therefore, a privacy protection function needs to be included in a Mobile RFID system utilizing those tags.

This International Standard is intended to address consumer privacy-protection for Mobile RFID services. It focuses on technical solutions for protecting the privacy of Mobile RFID consumers. Its scope is limited to consumer privacy-protection suitable for tags and interrogators conforming to ISO/IEC 18000-6 Type C and ISO/IEC 18000-3 MODE 3 RFID interfaces. Cases for other ISO/IEC 18000-X protocols are not included. In addition, this International Standard will be coordinated with ISO/IEC 29167-X without conflict.

Consumer privacy-protection issues may be a critical barrier to deploying Mobile RFID services in a commercial field. Unless the Mobile RFID system is properly designed in aspects of privacy protection, there may be unexpected effects for Mobile RFID consumers. This International Standard is not required for tags attached to some items. But, it is useful for providing a technique for protecting the consumer's information if the tags are attached to private possessions such as purchased jewels and medicines.

Information technology — Mobile item identification and management — Consumer privacy-protection protocol for Mobile RFID services

1 Scope

This International Standard specifies a consumer privacy-protection protocol for Mobile RFID services. It provides a technical solution for addressing privacy concerns with tagged items for consumers.

This International Standard focuses on tag-to-interrogator communications for providing a consumer privacy-protection solution. Interrogator-to-host and host (back-end enterprise) system security issues are not within the scope of this International Standard, but are covered by a variety of other best-practice documents.

2 Conformance

This International Standard is intended for use in conjunction with the other standards related to Mobile RFID services. It can be applied to tags and interrogators conforming to ISO/IEC 18000-6 Type C and ISO/IEC 18000-3 MODE 3 RFID air interfaces and can, wherever appropriate and practicable, also be applied to tags and interrogators other than those covered by ISO/IEC 18000-6 Type C and ISO/IEC 18000-3 MODE 3 RFID air interfaces.

3 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 18000-3, *Information technology — Radio frequency identification for item management — Part 3: Parameters for air interface communications at 13,56 MHz*

ISO/IEC 18000-6, *Information technology — Radio frequency identification for item management — Part 6: Parameters for air interface communications at 860 MHz to 960 MHz*

ISO/IEC 19762 (all parts), *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary*

ISO/IEC 29172, *Information technology — Mobile item identification and management — Reference architecture for Mobile AIDC services*