INTERNATIONAL STANDARD

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Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure —

Part 1: Architecture

Technologies de l'information — Identification de radiofréquence (RFID) pour la gestion d'élément — Infrastructure de systèmes logiciels —

Partie 1: Architecture

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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 24791-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 31, *Automatic identification and data capture techniques*.

ISO/IEC 24791 consists of the following parts, under the general title *Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure*:

— *Part 1: Architecture*

— *Part 2: Data management*

— *Part 5: Device interface*

The following parts are under preparation:

— *Part 3: Device management*

Introduction

Radio frequency identification (RFID) air interface technology is based on non-contact electro-magnetic communication among interrogators and tags. RFID software systems are composed of RFID interrogators, intermediate software systems, and applications that provide control and coordination of air interface operation, tag information exchange, and health and performance management of system components. RFID technology is expected to increase effectiveness in many aspects of business by further advancing the capabilities of automatic identification and data capture (AIDC). To achieve this goal through the successful adoption of RFID technology into real business environments, RFID devices, software systems, and business applications must provide secure and interoperable services, interfaces, and technologies. This is the goal of ISO/IEC 24791.

Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure —

Part 1: Architecture

1 Scope

ISO/IEC 24791 defines a Software System Infrastructure that enables RFID system operations between business applications and RFID interrogators. RFID software systems are composed of RFID interrogators, intermediate software systems, and applications that provide control and coordination of air interface operation, tag and sensor information exchange, and health and performance management of system components.

This part of ISO/IEC 24791 provides the following:

— an overview of the Software System Infrastructure;

— the relationship of the Software System Infrastructure to existing ISO components, e.g. ISO/IEC 15962;

— a basic description of each Software System Infrastructure component and the services that it provides (The detailed description of a particular component can be found in other Parts of ISO/IEC 24791.);

— illustrative (informative) deployment models of the components of the Software System Infrastructure.

2 Conformance

This part of ISO/IEC 24791 describes the overall RFID Software System Infrastructure, but it does not define conformance requirements. Conformance requirements are specified in the other parts of ISO/IEC 24791. There is no requirement for an RFID software system to conform to each of the parts; all conformance requirements are based on the individual parts only.

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 19762-1, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary — Part 1: General terms relating to AIDC*

ISO/IEC 19762-3, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary — Part 3: Radio frequency identification (RFID)*