TECHNICAL REPORT

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Information technology — Real-time locating system (RTLS) device conformance test methods — Test methods for air interface communication at 2,4 GHz

Technologies de l'information — Méthodes d'essai de conformité du dispositif des systèmes de localisation en temps réel (RTLS) — Méthodes d'essai pour la communication d'interface d'air à 2,4 GHz

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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.

In exceptional circumstances, the joint technical committee may propose the publication of a Technical Report of one of the following types:

— type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;

— type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;

— type 3, 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).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

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 TR 24769, which is a Technical Report of type 3, was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 31, *Automatic identification and data capture techniques*.

Introduction

ISO/IEC 24730 defines the air interfaces and an application programming interface for Real Time Locating Systems (RTLS) devices used in asset management applications.

This Technical Report contains all measurements required to be made on a product in order to establish whether it conforms to ISO/IEC 24730-2.

Test methods for measuring performance of equipment compliant with ISO/IEC 24730-2 are given in ISO/IEC TR 24770.

Information technology — Real-time locating system (RTLS) device conformance test methods — Test methods for air interface communication at 2,4 GHz

1 Scope

This Technical Report defines the test methods for determining the conformance of 2,4 GHz real-time locating system (RTLS) tags with the specifications given in the corresponding parts of ISO/IEC 24730-2, but does not apply to the testing of conformity with regulatory or similar requirements.

The test methods require only that the mandatory functions, and any optional functions which are implemented, be verified. This may in appropriate circumstances, be supplemented by further, application specific functionality criteria that are not available to the general case.

The RTLS tag conformance parameters included in this document include the mandatory direct sequence spread spectrum (DSSS) 2,4 GHz radio frequency beacon. It also includes the optional on-off keyed, frequency shift keyed (OOK/FSK) short range radio frequency link and the optional magnetic air interface

Unless otherwise specified, the tests in this Technical Report apply exclusively to RTLS tags defined in ISO/IEC 24730-2.

2 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)*

ISO/IEC 24730-2, *Information technology — Real-time locating systems (RTLS) — Part 2: 2,4 GHz air interface protocol*