INTERNATIONAL STANDARD

ISO/IEC 23917

First edition
2005-11-01

Information technology — Telecommunications and information exchange between systems — NFCIP-1 — Protocol Test Methods

Technologies de l'information — Télécommunications et échange d'information entre systèmes — NFCIP-1 — Méthodes d'essai du protocole

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Reference number
ISO/IEC 23917:2005(E)

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Published in Switzerland

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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 23917 was prepared by Ecma International (as ECMA-362) and was adopted, under a special “fast-track procedure”, by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by national bodies of ISO and IEC.

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Introduction

In 2002, Ecma International formed Task Group 19 of Technical Committee 32 to specify Near Field Communication (NFC) signal interfaces and protocols. The NFC devices are wireless closely coupled devices communicating at 13,56 MHz.

The General Assembly of December 2002 adopted Near Field Communication Interface and Protocol-1 (NFCIP-1) as Standard ECMA-340 (ISO/IEC 18092).

This International Standard specifies protocol tests for ECMA-340 (ISO/IEC 18092) and complements ECMA-356 (ISO/IEC 22536), which specifies the RF interface tests for ECMA-340 (ISO/IEC 18092).

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Information technology — Telecommunications and information exchange between systems — NFCIP-1 — Protocol Test Methods

1 Scope

This International Standard specifies protocol test methods for ISO/IEC 18092 in addition to those specified in ISO/IEC 22536.

2 Conformance

In addition to conforming to ISO/IEC 22536, implementations of ISO/IEC 18092 shall pass all normative tests and requirements specified herein; test results shall be recorded using Annex A and Annex B of this International Standard.

3 Normative references

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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 10373-6:2001, *Identification cards — Test methods — Part 6: Proximity cards*

ISO/IEC 18092:2004, *Information technology — Telecommunications and information exchange between systems — Near Field Communication — Interface and Protocol (NFCIP-1)*

ISO/IEC 23917:2005
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ISO/IEC 22536:2005, *Information technology — Telecommunications and information exchange between systems — NFCIP-1 - RF interface test methods*

4 Notational conventions

4.1 Representation of numbers

The following conventions and notations apply in this document unless otherwise stated.

- Letters and digits in parentheses represent numbers in hexadecimal notation.
- The setting of bits is denoted by ZERO or ONE.
- Numbers in binary notation and bit patterns are represented by strings of digits 0 and 1 shown with the most significant bit to the left. Within such strings, X may be used to indicate that the setting of a bit is not specified within the string.

4.2 Names

The names of basic elements, e.g. specific fields, are written with a capital initial letter.

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