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Information technology — Telecommunications and information exchange between systems — Near Field Communication Wired Interface (NFC-WI)

Technologies de l'information — Téléinformatique — Interface câblée de communication de champs proche (NFC-WI)

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Foreword

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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.

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ISO/IEC 28361 was prepared by Ecma International (as ECMA-373) 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.

Introduction

Following the standardisation of Near Field Communication (NFC) systems and their test methods in Ecma International, this International Standard specifies a two-wire interface between two components called "Transceiver" and "Front-end". Systems that implement the NFC-WI interface can thus be augmented with, for example, a wireless Front-end for NFCIP-1 as illustrated in Figure 1. Although this International Standard only specifies requirements for the Signal-In and Signal-Out wires and the digital signals they carry, informative Annex A lists some NFCIP-1 specific considerations.
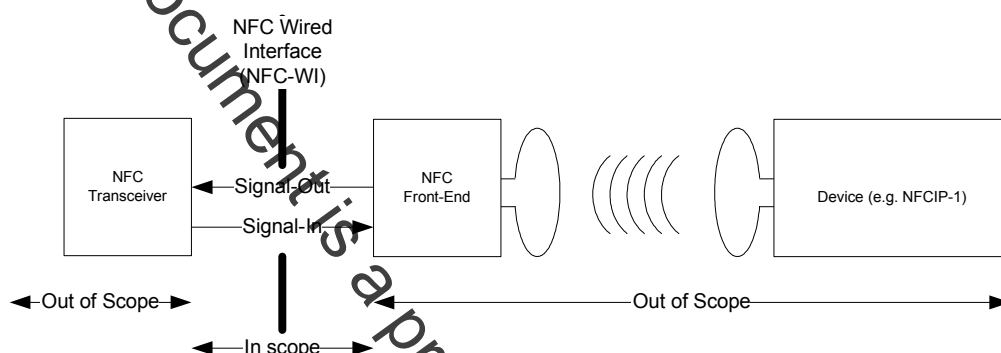

Figure 1 — Context diagram for the NFC wired interface

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1 Scope

This International Standard specifies the digital wire interface between a Transceiver and a Front-end. The specification includes the signal wires, binary signals, the state diagrams and the bit encodings for three data rates.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1
Clock
sequence of LOW and HIGH as defined in 3.2 with duration of $1/(2*f_{CLK})$, where f_{clk} is the clock frequency as defined in 6.3

2.2
Information
bit-coded data as defined in Clause 8

2.3
Front-end
entity that drives the Signal-Out wire and receives on the Signal-In wire

2.4
Transceiver
entity that drives the Signal-In wire and receives on the Signal-Out wire

3 Conventions and notations

3.1 Representation of bit values

Bit values are either ZERO or ONE.

3.2 Representation of logical states of LOW and HIGH

— The logical signal state is LOW if the electrical level of a signal has the input voltage of V_{IL} or the output voltage of V_{OL} as specified in Table 1 in 6.2.

— The logical signal state is HIGH if the electrical level of a signal has the input voltage of V_{IH} or the output voltage of V_{OH} as specified in Table 1 in 6.2.