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Information technology — Automatic identification and data capture techniques — Bar code verifier conformance specification —

Part 2: Two-dimensional symbols

Technologies de l'information — Techniques automatiques d'identification et de capture des données — Spécifications de conformité des vérificateurs de codes à barres —

Partie 2: Symboles bi-dimensionnels

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives or www.iec.ch/members_experts/refdocs).

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

This third edition cancels and replaces the second edition (ISO/IEC 15426-2:2015), which has been technically revised.

The main changes are as follows:

— tolerances for certain parameters have been clarified;

— fixed pattern damage test symbol for Aztec code has been added.

A list of all parts in the ISO/IEC 15426 series can be found on the ISO and IEC websites.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

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Introduction

The technology of bar coding is based on the recognition of patterns encoded, in bars and spaces or in a matrix of modules of defined dimensions, according to rules defining the translation of characters into such patterns, known as the symbology specification. Symbology specifications can be categorised into linear symbols, on the one hand, and two-dimensional symbols on the other; the latter can in turn be subdivided into «multi-row bar codes» sometimes referred to as “stacked bar codes”, and “two-dimensional matrix codes”.

Multi-row bar codes are constructed graphically as a series of rows of symbol characters, representing data and overhead components, placed in a defined vertical arrangement to form a (normally) rectangular symbol, which contains a single data message. Each row of the symbol has the characteristics of a linear bar code symbol and can be read by linear symbol scanning techniques.

Two-dimensional matrix symbols are usually rectangular arrangements of modules placed at the intersections of a grid of two (sometimes more) axes; the coordinates of each module need to be known in order to determine its significance, and the symbol must therefore be analysed two-dimensionally before it can be decoded.

Unless the context requires otherwise, the term “symbol” in this document can refer to either type of symbology.

The symbol, as a machine-readable data carrier, must be produced in such a way as to be reliably decoded at the point of use, if it is to fulfil its basic objective. Standard methodologies have been developed for measuring and assessing the quality of symbols for process control and quality assurance purposes during symbol production as well as afterwards.

Manufacturers of bar code equipment, the producers of bar code symbols and the users of bar code technology require publicly available standard conformance specifications for measuring equipment applying these methodologies, to ensure the accuracy and consistency of the performance of this equipment.

This document is intended to be similar in technical content (mutatis mutandis) to the linear bar code verifier conformance standard, ISO/IEC 15426-1, on which this document has been based. This document should be read in conjunction with the symbology specification applicable to the bar code symbol being tested, which provides symbology-specific detail necessary for its application.

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Information technology — Automatic identification and data capture techniques — Bar code verifier conformance specification —

Part 2: Two-dimensional symbols

1 Scope

This document specifies the test methods for representative samples of the equipment and the minimum accuracy criteria applicable to verifiers using the methodologies of ISO/IEC 15415 for multi-row bar code symbols and two-dimensional matrix symbologies. This document also specifies reference calibration standards for verifier conformance.

NOTE ISO/IEC 15426-1 applies to verifiers for linear bar code symbols.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 15415, *Information technology — Automatic identification and data capture techniques — Bar code symbol print quality test specification — Two-dimensional symbols*

ISO/IEC 15416, *Automatic identification and data capture techniques — Bar code print quality test specification — Linear symbols*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 15415, ISO/IEC 19762 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
primary reference test symbol
bar code symbol intended for the testing of the accuracy of bar code verifiers and manufactured to close tolerances, much higher than bar code verifiers to be tested, by methods traceable to national standards

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