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Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary —

Part 1: General terms relating to AIDC

Technologies de l'information — Techniques d'identification automatique et de capture de données (AIDC) — Vocabulaire harmonisé —

Partie 1: Termes généraux relatifs à l'AIDC

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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 19762 consists of the following parts, under the general title *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary*:

— *Part 1: General terms relating to AIDC*

— *Part 2: Optically readable media (ORM)*

— *Part 3: Radio frequency identification (RFID)*

Introduction

ISO/IEC 19762 is intended to facilitate international communication in information technology, specifically in the area of automatic identification and data capture (AIDC) techniques. It provides a listing of terms and definitions used across multiple AIDC techniques.

Abbreviations used within each part of ISO/IEC 19762 and an index of all definitions used within each part of ISO/IEC 19762 are found at the end of each document.

Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary —

Part 1: **General terms relating to AIDC**

Scope

This part of ISO/IEC 19762 provides general terms and definitions in the area of automatic identification and data capture techniques on which are based further specialized sections in various technical fields, as well as the essential terms which should be used by non-specialist users in communication with specialists in automatic identification and data capture techniques.

Classification of entries

The numbering system employed within ISO 19762 is in the format nn.nn.nnn, in which the first two numbers (***nn***.nn.nnn) represent the "Top Level" reflecting whether the term is related to 01 = Common to All AIDC Techniques, 02 = Common to All Optically Readable Media, 03 = Linear Bar Code Symbols, 04 = Two-dimensional Symbols, and 05 = Radio Frequency Identification. The second two numbers (nn.***nn***.nnn) represent the "Mid Level" reflecting whether the term is related to 01 = Basic Concepts/Data, 02 = Technical Features 03 Symbology, 04 = Hardware, and 05 = Applications. The third two or three numbers (nn.nn.***nnn***) represent the "Fine" reflecting a sequence of terms.

The numbering in this part of ISO/IEC 19762 employs "Top Level" numbers (**nn**.nn.nnn) of 01

Terms and definitions

01.01.01
digital
pertaining to **data** that consist of digits as well as to processes and functional units that use those data

[ISO/IEC 2382-1:1993 01.02.04]

NOTE 1 Represented in a binary form rather than a continuously varying analogue form.

NOTE 2 In the context of integrated artwork, produced by a number of discrete dots rather than a continuous image.

01.01.02
error(1)
⟨**digital data**⟩ result of capture, storage, processing or communication of data in which a bit or bits assume the wrong values, or bits are missing from a data stream

01.01.03
error(2)
discrepancy between a computed, observed, or measured value and condition and the true, specified, or theoretically correct value or condition

01.01.04
error(3)
any invalid condition experienced by a system

NOTE An attempt to divide by zero is an example of an error.

01.01.05
error burst
group of **bits** in which two successive erroneous bits are always separated by less than a given number of correct bits

01.01.06
error control(1)
any technique used to reduce the incidence of errors in the recording, processing or transfer of information

[IEC 60050-702 702-07-40]

01.01.07
error control(2)
⟨data communications⟩ part of a **protocol** that enables error **detection** and possibly error correction

01.01.08
error correcting code
error detecting code which permits the automatic correction of some of the errors detected

01.01.09
error detection code
redundant code in which the rules of construction permit the automatic detection of certain errors which have been produced during recording, processing or transfer of information, when these errors have caused a deviation from the rules

[IEC 60050-702 702-05-19]

01.01.10
file
named set of records treated as a unit

[ISO/IEC 2382-4:1999 04.07.10]

NOTE Files are stored within a computer, portable **data** terminal or **information** management system.

01.01.11
zero-suppression(1)
elimination of non-significant zeros from a numeral

01.01.12
zero-suppression(2)
function that allows the process by which unwanted zeros are omitted from the printed or displayed result of a calculation

01.01.13
zero-suppression(3)
process of removing zeroes from specified positions in a UCC-12 **data** string in order to **encode** it in UPC-E format

01.01.14
data
reinterpretable representation of information in a formalized manner suitable for communication, interpretation, or processing

cf. **information**

[ISO/IEC 2382-1:1993 01.01.02]

NOTE 1 Data can be processed by humans or by automatic means.

NOTE 2 Data can be in the form of numbers and characters for example, to which meaning may be ascribed.

01.01.15
data coding
baseband **data** bit representation, or mapping of logical data bits to physical signals

01.01.16
data identifier
DI
specified character or string of characters, that defines the intended use of the **data** element that follows

NOTE For the purposes of automatic data capture technologies, Data Identifier means the **alphanumeric** identifiers, as defined in ISO/IEC 15418, EAN/UCC **Application Identifiers** and MH 10 Data Identifiers and Maintenance and ANS MH10.8.2.

01.01.17
data transmission
transfer of data from one point to one or more other points over telecommunication facilities

[ISO/IEC 2382-9 09.01.02]

01.01.18
information
⟨information processing⟩ knowledge concerning objects that within a certain context has a particular meaning

[ISO/IEC 2382-1:1993 01.01.01]

NOTE 1 Facts, events, things, processes, and ideas, including concepts, are examples of objects.

NOTE 2 Information is something which is meaningful. **Data** may be regarded as information once its meaning is revealed.

01.01.19
message(1)
unit of **information** transmitted from a source to a destination

01.01.20
message(2)
⟨information theory; communication theory⟩ ordered sequence of characters intended to convey **information**

[ISO/IEC 2382-16 16.02.01]

01.01.21
read, noun
process of retrieving **data** from some **machine-readable medium** and, as appropriate, the contention and **error control** management, and channel and source decoding required to recover and communicate the data entered at source

01.01.22
read, verb
obtain **data** from an input device, from a storage device, or from a data medium

01.01.23
reader(1)
functional unit that is used for the acquisition or interpretation of **data** from a storage device, from a data medium, or from another source

01.01.24
reader(2)
⟨micrographics⟩ device that enlarges micro images for viewing

01.01.25
license plate concept
concept where the fixed code contained in a **machine-readable medium** is used as a pointer into a database

NOTE Similar to the way in which the police can determine your name, address, etc. from your car number plate.

01.01.26
machine-readable medium
characteristic of automatic data capture media that permits the direct transfer of **information** from a medium to a data processing system, without operator intervention

NOTE Linear bar code symbols and two-dimensional symbols, magnetic-stripe smart cards, contact memory buttons, radio frequency identification biometrics, and optical character recognition are technologies of machine reading. The **data** is usually contained in pre-defined locations (fields) within a data stream. This data can be interpreted by a computer program.

01.01.27
readability
ability to retrieve **data** under specified conditions

01.01.28
electronic data interchange
EDI
electronic data interchange
exchange of **data** and documents between computer systems according to standard rules

01.01.29
interoperability testing
testing which checks that two or more products, pieces of equipment, or services, are able to perform together a set of functions defined in specifications or standards

NOTE 1 The communication **interface protocols** between the products may be also covered by the specifications/standards.

NOTE 2 Interoperability testing is a generic term, and a further refinement of its definition is necessary to distinguish between end-to-end testing, compatibility testing, and mapping testing.

01.01.30
bit
binary digit
either of the digits 0 or 1 when used in the binary numeration system

[ISO/IEC 2382-1:1993 01.02.08]

01.01.31
least significant bit
LSB
bit with the lowest binary value in a group of matching bits

NOTE A **byte** is an example of a group of matching bits.

01.01.32
most significant bit
MSB
bit with the highest binary value in a group of matching bits

NOTE A **byte** is an example of a group of matching bits.

01.01.33
binary coded decimal
BCD
binary-coded decimal representation
representation of decimal numbers in binary form using a group of four bits to represent an individual digit (0-9)

EXAMPLE In the binary-coded decimal notation that uses the weights 8-4-2-1, the decimal numeral 23 is represented by 0010 0011 as compared to its representation 10111 in the binary system.

01.01.34
numeric
denoting a **character set** that includes only numbers

cf. **alphanumeric**

01.01.35
alphanumeric
pertaining to **data** that consist of both letters and digits, and may contain other characters such as punctuation marks or pertaining to processes and functional units that use alphanumeric data

01.01.36
redundancy(1)
⟨functional unit⟩ existence of a means for improving reliability in addition to the essential set of means for performing a required function

01.01.37
redundancy(2)
characteristic whereby **information** is repeated to increase the probability of its being read or communicated successfully

NOTE In a bar code symbol the height of the bars provides vertical redundancy by enabling multiple **scan** paths to exist through the symbol, only one of which is necessary in theory for a complete **decode**.

01.01.38
scan(1), noun
single pass of a scanning beam over a symbol or a portion of a symbol

01.01.39
scan(2), noun
single image capture with an image capture device

01.01.40
scan(1), verb
systematically examine **data**