INTERNATIONAL STANDARD

ISO/IEC 15424

Second edition
2008-07-15

Information technology — Automatic identification and data capture techniques — Data Carrier Identifiers (including Symbology Identifiers)

Technologies de l'information — Techniques automatiques d'identification et de capture des données — Identifiants de porteuses de données (y compris les identifiants de symbologie)

Reference number
ISO/IEC 15424:2008(E)

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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 shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 15424 was prepared by Joint Technical Committee ISO/IEC JTC1, *Information technology*, Subcommittee SC 31, *Automatic identification and data capture techniques*.

This second edition cancels and replaces the first edition (ISO/IEC 15424:2000), which has been technically revised.

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Introduction

The need exists to identify the data carrier a reader detects in autodiscrimination environments. The Symbology Identifier concept provides a standardized way for a device receiving data from a reader to differentiate between the data carriers. This International Standard deals mostly with bar code symbologies; the terms Symbology Identifier, symbology, and bar code are therefore used throughout this International Standard although they are intended to apply to other data carriers as well.

This identification is achieved by the addition of an optional feature to readers enabling the reader to prefix a standard string of characters to data messages. This preamble contains information about the decoded symbol (or other data carrier) and any processing the reader has done. The information is not encoded or otherwise explicitly or implicitly represented in the symbol, except that the presence of some optional features may be detected by the reading equipment, whereas others require the reader to be expressly configured to implement them.

This International Standard is intended to be read in conjunction with the relevant symbology specifications.

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Information technology — Automatic identification and data capture techniques — Data Carrier Identifiers (including Symbology Identifiers)

1 Scope

This International Standard applies to automatic identification device communication conventions and standardizes the reporting of data carriers from bar code readers and other automatic identification equipment. It specifies a preamble message generated by the reader and interpretable by the receiving system, which indicates the bar code symbology or other origin of transmitted data, together with details of certain specified optional processing features associated with the data message.

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 646:1991, *Information technology — ISO 7-bit coded character set for information interchange*

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

AIM Inc. International Technical Specification: *Extended Channel Interpretations — Part 1: Identification Schemes and Protocols*

AIM Inc. International Technical Specification: *Extended Channel Interpretations — Part 2: Registration Procedure for Coded Character Sets and Other Data Formats*

AIM Inc. International Technical Specification: *Extended Channel Interpretations — Character Set Register*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

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

3.1.1
code character
second character in the symbology identifier string, which usually indicates to the host the bar code symbology of the symbol which has been read

3.1.2
flag character
first character in the symbology identifier string, which indicates to the host that it and the characters following are the symbology identifier characters

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3.1.3
modifier character(s)
one or more characters following the code character in the symbology identifier string, indicating optional features or processing applied to the symbol

3.1.4
FNC1, FNC2, FNC3, FNC4
special function character used for specific purposes in certain symbologies

3.2 Abbreviated terms

3.2.1
ECI
Extended Channel Interpretations

3.2.2
OCR
Optical Character Recognition

3.2.3
RF
Radio Frequency

4 Requirements

4.1 Applicability

This International Standard identifies symbologies for which a symbology specification has been published by ISO/IEC JTC 1, AIM Global, or another recognized international standards body. In addition there is a fixed number of symbologies which do not have a full standard but do have a reference document available from AIM Global. These symbologies are included in this International Standard because of their historical usage.

4.2 Structure

The symbology identifier shall be an ASCII character string prefixed by the reading equipment to the data contained in a bar code symbol.

The structure of the symbology identifier string shall be as follows:

]cm...

where] (ASCII value 93) represents the symbology identifier flag character;

c represents the code character as defined in Table 1;

m... represents the modifier character(s) as defined for the symbology in question.

NOTE The sign] is the character assigned to ASCII value 93 in the United States ASCII character set in accordance with ISO/IEC 646.

If a reader is enabled to transmit symbology identifiers, it shall always transmit a symbology identifier at the beginning of each message. The application must know whether or not the reader has symbology identifiers enabled. Therefore, the symbol data may start with a] and still be interpreted unambiguously.

When these ASCII characters are transmitted in a 16-bit (double byte) system, an 8-bit byte of all zeros shall be transmitted before each of the above ASCII characters (bytes).

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4.3 Code characters

Code characters shall be drawn from the set of upper- and lower-case alphabetic letters A through Z (ASCII values 65 through 90) and a through z (ASCII values 97 through 122). The currently assigned code characters are listed in Table 1. These code characters are case sensitive, i.e. a capital “A” is a different code character from a lower case “a”.

The code character Y is not assigned to a specific symbology but will be used for system expansion. The first modifier character following Y will be a digit from 1 to 9 defining the number of remaining modifier characters in the symbology identifier prefix string.

All code characters not given here are reserved for future use. Maintenance of the list of code characters (and of options given in 4.3) shall be in accordance with annex A of this International Standard.

Certain symbologies emulate the data content of other symbologies, using their assigned symbology identifier. See annex B.

Table 1 — Code characters

Code char.	Symbology	Code char.	Symbology
A	Code 39	a	reserved
B	Telepen	b	reserved
C	Code 128	c	Channel Code
D	Code One	d	Data Matrix
E	EAN/UPC	e	RSS and EAN.UCC Composite
F	Codabar	f	reserved
G	Code 93	g	reserved
H	Code 11	h	reserved
I	Interleaved 2 of 5	i	reserved
J	reserved	j	reserved
K	Code 16K	k	reserved
L	PDF417 and MicroPDF417	l	reserved
M	MSI	m	reserved
N	Anker	n	reserved
O	Codablock	o	OCR (Optical Character Recognition)
P	Plessey Code	p	PosiCode
Q	QR Code and QR Code 2005	q	reserved
R	Straight 2 of 5 (with two bar start/stop codes)	r	reserved
S	Straight 2 of 5 (with three bar start/stop codes)	s	SuperCode
T	Code 49	t	reserved
U	MaxiCode	u	reserved
V	reserved	v	reserved
W	reserved	w	reserved
X	Other bar code	x	reserved
Y	System expansion	y	reserved
Z	Non-bar code	z	Aztec Code

4.4 Modifier characters

Some symbologies covered by this International Standard contain optional features which need to be indicated to the receiving equipment to enable them to be correctly processed. This optional processing is indicated by the modifier character(s).

Each symbology has a different set of optional features. These are listed in the following subclauses.

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To determine the modifier character(s) for an application, refer to the subclause corresponding to the symbology concerned. Listed in this subclause may be one or more processing options, each of which has an assigned option value. The precise interpretation of the option should be obtained by reference to the relevant symbology specification. The modifier characters define the options available for the code character. The number of modifier characters and their meaning is defined for each of the code characters. The first modifier character shall be from the set {0 to 9, A to Z, a to z}; in some instances the character may represent a hexadecimal value (0 to F) corresponding to the sum of active processing options.

Where no options are indicated in the subclauses, the modifier character to be transmitted is 0. Values which are not included in the modifier values of a subclause are reserved for future use.

Check character options listed in the subclauses below indicate the basis of calculation of the check character, where a check character algorithm has been defined in the symbology specification or reference document.

Symbologies that support the ECI protocol have one or more modifiers to indicate that the ECI protocol is being used. Unless otherwise stated, the default ECI interpretation for these symbologies is \000003.

4.4.1 Code 39

Code character: **A**

Modifier character value	*Option*
0	No check character validation nor full ASCII processing; all data transmitted as decoded
1	Modulo 43 check character validated and transmitted
3	Modulo 43 check character validated but not transmitted
4	Full ASCII character conversion performed; no check character validation
5	Full ASCII character conversion performed; modulo 43 check character validated and transmitted
7	Full ASCII character conversion performed; modulo 43 check character validated but not transmitted

4.4.2 Telepen

Code character: **B**

Modifier character value	*Option*
0	Full ASCII mode
1	Double density numeric only mode
2	Double density numeric followed by full ASCII
4	Full ASCII followed by double density numeric

4.4.3 Code 128

Code character: **C**

Modifier character value	*Option*
0	Standard data packet. No FNC1 in first or second symbol character position after start character
1	GS1-128 data packet - FNC1 in first symbol character position after start character
2	FNC1 in second symbol character position after start character
4	Concatenation according to International Society for Blood Transfusion specifications has been performed; concatenated data follows

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4.4.4 Channel Code

Code character: **c**

Modifier character value	*Option*
3	Channel 3 decoded
4	Channel 4 decoded
5	Channel 5 decoded
6	Channel 6 decoded
7	Channel 7 decoded
8	Channel 8 decoded
9	Composite format

4.4.5 Code One

Code character: **D**

Modifier character value	*Option*
0	No special characters in first or second symbol character position
1	FNC1 implied in first symbol character position
2	FNC1 in second symbol character position
4	Pad character in first symbol character position. The first data character in the symbol will define the escape character. When this character is a \ it indicates that the symbol contains ECI escape sequences.

4.4.6 Data Matrix

Code character: **d**

Modifier character value	*Option*
0	ECC 000 to ECC 140
1	ECC 200
2	ECC 200, FNC1 in first or fifth position
3	ECC 200, FNC1 in second or sixth position
4	ECC 200, ECI protocol implemented
5	ECC 200, FNC1 in first or fifth position, ECI protocol implemented
6	ECC 200, FNC1 in second or sixth position, ECI protocol implemented

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4.4.7 EAN/UPC

Code character: **E**

EAN/UPC symbols with supplements should be considered as two separate symbols. The first symbol is the main data packet, and the second symbol is the 2 or 5 digit supplement. These two symbols should be transmitted separately, each with its own symbology identifier. Provision is, however, made for the option of transmission of both symbols as a single data packet.

Modifier character value	*Option*
0	Standard data packet, i.e. 13 digits for EAN-13, UPC-A and UPC-E (does not include add-on data)
1	Two digit add-on data only
2	Five digit add-on data only
3	Combined data packet comprising 13 digits from EAN-13, UPC-A or UPC-E symbol and 2 or 5 digits from add-on symbol
4	Data packet comprising 8 digits from EAN-8 symbol

4.4.8 RSS (Reduced Space Symbology) and EAN.UCC Composite

Code character: **e**

Modifier character value	*Option*
0	Standard data packet
1	Data packet containing the data following an encoded symbol separator character
2	Data packet containing the data following an escape mechanism character. The data packet does not support the ECI protocol
3	Data packet containing the data following an escape mechanism character. The data packet supports the ECI protocol

NOTE 1 The protocol for “]e2” corresponds to the protocol defined for PDF417 using Symbology Identifier “]L2”, and the protocol for “]e3” corresponds to the protocol defined for PDF417 using Symbology Identifier “]L1”.

NOTE 2 When transmitting data from EAN.UCC Composite symbols, two separate transmissions from the reader are required. The data from the EAN/UPC component is prefixed with a symbology identifier in accordance with 4.4.7. Modifier character values 1, 2 and 3 shall not be used when transmitting data from RSS symbols.

When GS1-128 emulation option is enabled in the reader, each data packet (except the data from an EAN/UPC component) shall be prefixed with a symbology identifier of "]C1".

4.4.9 Codabar

Code character: **F**

Modifier character value	*Option*
0	Standard Codabar symbol. No special processing.
1	ABC Codabar (American Blood Commission) concatenate/message append performed
2	Reader has validated the check character
4	Reader has stripped the check character before transmission

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4.4.10 Code 93 and 93i

Code character: **G**

4.4.10.1 Options applicable to Code 93 only

Modifier character value	*Option*
0	No options specified at this time. Always transmit 0

4.4.10.2 Options applicable to 93i

m	Assoc. Data Carrier	FNC1 1st	FNC1 2d,3d	Word Mode	ECI	Lnk'd Seq'n	m	Assoc. Data Carrier	FNC1 1st	FNC1 2d,3d	Word Mode	ECI	Lnk'd Seq'n
0	No	No	No	No	No	No							
1	No	No	No	No	No	No	**P**	Yes	No	No	No	No	No
2	No	No	No	No	No	Yes	**Q**	Yes	No	No	No	No	Yes
3	No	No	No	No	Yes	No	**R**	Yes	No	No	No	Yes	No
4	No	No	No	No	Yes	Yes	**S**	Yes	No	No	No	Yes	Yes
5	No	No	No	Yes	No	No	**T**	Yes	No	No	Yes	No	No
6	No	No	No	Yes	No	Yes	**U**	Yes	No	No	Yes	No	Yes
7	No	No	No	Yes	Yes	No	**V**	Yes	No	No	Yes	Yes	No
8	No	No	No	Yes	Yes	Yes	**W**	Yes	No	No	Yes	Yes	Yes
9	No	No	Yes	No	No	No	**X**	Yes	No	Yes	No	No	No
A	No	No	Yes	No	No	Yes	**Y**	Yes	No	Yes	No	No	Yes
B	No	No	Yes	No	Yes	No	**Z**	Yes	No	Yes	No	Yes	No
C	No	No	Yes	No	Yes	Yes	**a**	Yes	No	Yes	No	Yes	Yes
D	No	No	Yes	Yes	No	No	**b**	Yes	No	Yes	Yes	No	No
E	No	No	Yes	Yes	No	Yes	**c**	Yes	No	Yes	Yes	No	Yes
F	No	No	Yes	Yes	Yes	No	**d**	Yes	No	Yes	Yes	Yes	No
G	No	No	Yes	Yes	Yes	Yes	**e**	Yes	No	Yes	Yes	Yes	Yes
H	No	Yes	No	No	No	No	**f**	Yes	Yes	No	No	No	No
I	No	Yes	No	No	No	yes	**g**	Yes	Yes	No	No	No	yes
J	No	Yes	No	No	Yes	No	**h**	Yes	Yes	No	No	Yes	No
K	No	Yes	No	No	Yes	Yes	**i**	Yes	Yes	No	No	Yes	Yes
L	No	Yes	No	Yes	No	No	**j**	Yes	Yes	No	Yes	No	No
M	No	Yes	No	Yes	No	Yes	**k**	Yes	Yes	No	Yes	No	Yes
N	No	Yes	No	Yes	Yes	No	**l**	Yes	Yes	No	Yes	Yes	No
O	No	Yes	No	Yes	Yes	Yes	**m**	Yes	Yes	No	Yes	Yes	Yes

If the entry in the ECI column is “Yes” and the entry in the Word Mode column is “No”, then the default Interpretative ECI is \000003.

If the entry in the ECI column is “Yes” and the entry in the Word Mode column is also “Yes”, then the default Interpretative ECI is \000025.

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4.4.11 Code 11

Code character: **H**

Modifier character value	*Option*
0	Single modulo 11 check character validated and transmitted
1	Two modulo 11 check characters validated and transmitted
3	Check character(s) validated but not transmitted

4.4.12 Interleaved 2 of 5

Code character: **I**

Modifier character value	*Option*
0	No check character validation
1	Modulo 10 symbol check character validated and transmitted
3	Modulo 10 symbol check character validated but not transmitted

4.4.13 Code 16K

Code character: **K**

Modifier character value	*Option*
0	No special characters in first or second symbol character position after start character
1	FNC1 implied or explicit in first symbol character position after start character
2	FNC1 in second symbol character position after start character
4	Pad character in first symbol character position after start character

4.4.14 PDF417 and MicroPDF417

Code character: **L**

Modifier character value	*Option*
0	Reader set to conform with protocol defined in 1994 PDF417 symbology specifications
1	Reader set to follow protocol of ISO/IEC 15438 for Extended Channel Interpretation (All data characters 92 doubled)
2	Reader set to follow protocol of ISO/IEC 15438 for Basic Channel Interpretation (Data characters 92 are not doubled)
3	Code 128 emulation: implied FNC1 in first position
4	Code 128 emulation: implied FNC1 after initial letter or pair of digits
5	Code 128 emulation: no implied FNC1

NOTE Modifier values 3, 4 and 5 are applicable only to MicroPDF417 symbols.

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4.4.15 MSI

Code character: **M**

Modifier character value	*Option*
0	Modulo 10 symbol check character validated and transmitted
1	Modulo 10 symbol check character validated but not transmitted

4.4.16 Anker Code

Code character: **N**

Modifier character value	*Option*
0	No options specified at this time. Always transmit 0

4.4.17 Codablock

Code character: **O**

Modifier character value	*Option*
4	Codablock F: FNC1 not used
5	Codablock F: FNC1 in first data character position; subsequent occurrences converted to ASCII 29 (GS)
6	Codablock A

4.4.18 OCR (Optical Character Recognition)

Code character: **o**

Modifier character value	*Option*
0	Unspecified font
1	OCR-A
2	OCR-B
3	Other font

4.4.19 Plessey Code

Code character: **P**

Modifier character value	*Option*
0	No options specified at this time. Always transmit 0

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4.4.20 PosiCode

Code character: **p**

Modifier character value	*Option*
0	Standard data packet. No FNC1 in first or second symbol character position after Start Character
1	FNC1 preceding the first data character
2	FNC1 immediately following an AIM application indicator

4.4.21 QR Code

Code character: **Q**

Modifier character value	*Option*
0	QR Code Model 1 symbol (in accordance with AIM ISS 97-001)
1	QR Code 2005 symbol, ECI protocol not implemented
2	QR Code 2005 symbol, ECI protocol implemented
3	QR Code 2005 symbol, ECI protocol not implemented, FNC1 implied in first position
4	QR Code 2005 symbol, ECI protocol implemented, FNC1 implied in first position
5	QR Code 2005 symbol, ECI protocol not implemented, FNC1 implied in second position
6	QR Code 2005 symbol, ECI protocol implemented, FNC1 implied in second position

NOTE Modifier character values 1 to 6 correspond to Model 2 symbols in ISO/IEC 18004-2000.

4.4.22 Straight 2 of 5 (with two bar start/stop codes)

Code character: **R**

Modifier character value	*Option*
0	No check character validation
1	Modulo 7 check character validated and transmitted
3	Modulo 7 check character validated but not transmitted

4.4.23 Straight 2 of 5 (with three bar start/stop codes)

Code character: **S**

Modifier character value	*Option*
0	No options specified at this time. Always transmit 0

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4.4.24 SuperCode

Code character: **s**

Modifier character value	*Option*
0	Symbol conforming to LLD0 (Null Interpretation), using the obsolete SuperCode specification
1	Symbol conforming to LLD1, using the obsolete SuperCode specification
2	Basic Channel Mode Operation: symbol conforming to LLD2 or 3
3	Extended Channel Mode Operation: symbol conforming to LLD2 or 3. Reader automatically set to follow the Extended Channel Interpretation protocol
4	Symbol conforming to a closed system LLD. Decoder set for all functions of Symbol Structure Header, including error correction. For option 4, the value of the reserved LLD (4 to 14) shall be transmitted as a two digit decimal value as fourth and fifth characters of the Symbology Identifier

4.4.25 Code 49

Code character: **T**

Modifier character value	*Option*
0	No special characters in the first or second data character positions
1	FNC1 in the first data character position
2	FNC1 in the second data character position
4	FNC2 in the first data character position

4.4.26 MaxiCode

Code character: **U**

Modifier character value	*Option*
0	Symbol in Mode 4 or 5
1	Symbol in Mode 2 or 3
2	Symbol in Mode 4 or 5, ECI protocol implemented
3	Symbol in Mode 2 or 3, ECI protocol implemented in secondary message

4.4.27 Other bar code

Code character: **X**

For symbologies or symbology options not covered by this International Standard, code character X with the following options may be assigned by the decoder manufacturer to identify those symbologies and options implemented in the reader.

Modifier character value	*Option*
0 to F	May be assigned by the decoder manufacturer

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4.4.28 Non-bar code

Code character: **Z**

Where it is necessary to identify the source of data originating from a device other than a bar code reader, the code character Z together with the following options may be assigned by the device manufacturer.

Modifier character value	*Option*
0	Keyboard
1	Magnetic Stripe
2	Radio Frequency (RF) tag
3 to F	May be assigned by device manufacturer

4.4.29 Aztec Code

Code character: **z**

Modifier character value	*Option*
0	No options
1	FNC1 preceding 1st message character
2	FNC1 following an initial letter or pair of digits
3	ECI protocol implemented
4	FNC1 preceding 1st message character, ECI protocol implemented
5	FNC1 following an initial letter or pair of digits, ECI protocol implemented
6	Structured Append header included
7	Structured Append header included, FNC1 preceding 1st message character
8	Structured Append header included, FNC1 following an initial letter or pair of digits
9	Structured Append header included, ECI protocol implemented
A	Structured Append header included, FNC1 preceding 1st message character, ECI protocol implemented
B	Structured Append header included, FNC1 following an initial letter or pair of digits, ECI protocol implemented
C	Aztec Rune decoded

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Annex A
(normative)

Maintenance

Maintenance of the list of symbology identifiers defined in this International Standard is the responsibility of:

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to whom applications for the assignment of new symbology identifiers shall be made. AIM Global will assess the technical justification for the proposed new assignment and take into account the opinions of its international affiliates in order to ensure the maximum harmonisation of related standards.

AIM Global will assign a new symbology identifier during the development of a new symbology specification. The specification shall contain a section specifying the symbology identifier and its modifier values. If and when the specification is published by AIM Global, it will update the data carrier/symbology identifier maintenance document to reflect the symbology identifier section in the published specification. The maintenance document shall be identified with the month and year of publication.

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Annex B
(normative)

Symbology emulation

Symbology identifiers generally provide a one-to-one relationship between a specific symbology and a symbology identifier code character. Symbology emulation defines the relationship between symbologies and code characters that are not a one-to-one relationship. Symbology emulation is allowed for three specific instances.

B.1 Inherent symbology specific emulation

Whenever a symbology specification specifies the use of a code character assigned to another symbology as the native code character, this relationship is defined as inherent symbology specific emulation. The symbologies which share the same code character should be defined with common data character sets and features.

As an example, MicroPDF417 specifies the same code character “L” be used as PDF417.

B.2 Inherent GS1 application emulation

The Symbology Identifier string]C1 signifies a Code 128 symbol with a FNC1 in the first position. These GS1-128 symbols are assigned to the GS1 system. However, the GS1 system permits the future use of other symbologies/data carriers to encode the system’s application identifier data strings. It is intended that the Symbology Identifier string]C1 will be used with these future symbologies/data carriers. The selection of the appropriate symbologies/data carriers shall be the sole responsibility of GS1.

B.3 Optional application-specific emulation

Certain symbologies offer a feature whereby some or all symbols emulate the data content of another symbology and decoders may transmit the data to an application as though it had been decoded from the emulated symbology.

When transmitting such data, decoders should prefix the data with the symbology identifier appropriate either to the emulated symbology or to the symbology used for encoding.

The transmission of the symbology identifier for the emulated symbology shall be subject to the following conditions:

— The application specification shall explicitly permit the emulation feature to be used and shall define which symbologies may be used.

— The symbology used for encoding should be at least as secure as the emulated symbology.

— The application specification shall define which symbology identifier is to be transmitted, either the symbology identifier for the emulated symbology, or the symbology identifier for the symbology used for encoding.

— The data content of the symbol must correspond to a valid symbol for the application in the emulated symbology.

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— Emulation cannot be generically applied to all symbols of the emulating symbology; the reader shall only transmit emulated data from symbols encoded with a unique symbology-specific feature denoting that this symbol is meant to be transmitted as an emulation of another symbology, as defined in the symbology specification.

As an example, MicroPDF417 allows the emulation of Code 128 and GS1-128. It has assigned codewords which indicate that the MicroPDF417 symbol's data output shall conform with the Code 128 specification. If symbology identifiers are enabled, then each such symbol's transmission will be prefixed by either "]Cm" or "]Lm". MicroPDF417 readers are configurable to transmit either symbology identifier prefix, as required by the application.

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Annex C
(informative)

Reference documents

Symbology	Reference document
Anker	AIM USA USD – Anker Code
Aztec Code	ISO/IEC 24778; (AIM ITS 97/002 Aztec Code)
Aztec Mesas	AIM ITS/99-003 Aztec Mesas
Channel Code	ANSI/AIM BC12-1997, USS-Channel Code
Codabar	ANSI/AIM BC3 – 1995, USS-Codabar
Codablock A	AIM USA Technology group 4/18/94 TSC052 - Codablock A (39)
Codablock F	AIM Europe USS – Codablock F
Code 11	AIM USA USD – Code 11
Code 128	ISO/IEC 15417
Code 16K	ENV 12323
Code 39	ISO/IEC 16388
Code 49	ANSI/AIM BC6 – 1995, Code 49
Code 93	ANSI/AIM BC5 –1995, Code 93
Code 93i	AIM ITS/99-004 - 93i
Code One	AIM USA USS – Code One
EAN/UPC	ISO/IEC 15420
EAN.UCC Composite	ISO/IEC 24723
Data Matrix	ISO/IEC 16022
Interleaved 2 of 5	ISO/IEC 16390
MaxiCode	ISO/IEC 16023
MicroPDF417	ISO/IEC 24728
MSI	AIM USA USD - MSI
OCR	OCR-A: ISO 1073-1: 1976 OCR-B: ISO 1073-2: 1976
PDF417	ISO/IEC 15438; AIM USA/Europe USS PDF417 (1994)
Plessey	AIM USA USD - Plessey
QR Code and QR Code 2005	QR Code 2005: ISO/IEC 18004 QR Code Model 1: AIM ISS 97-001
RSS (Reduced Space Symbology)	ISO/IEC 24724
Straight 2 of 5 (with 2 bar start/stop codes)	AIM USA USD – Straight 2 of 5
Straight 2 of 5 (with 3 bar start/stop codes)	AIM USA USD – Straight 2 of 5
Supercode	AIM ITS/99-006
Telepen	AIM Europe USS - Telepen

ENV = European Pre-standard, published by CEN (Comité Européen de Normalisation, Brussels, Belgium); a formal technical specification of the symbology.

ITS = International Technical Specification, published by AIM Global; a formal technical specification of the symbology.

USD = Uniform Symbology Description, published by AIM USA; a descriptive document rather than an authoritative specification.

USS = Uniform Symbology Specification, published by AIM USA or AIM Europe, a formal specification of the symbology.

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