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Information technology — Automatic identification and data capture techniques — Unique identification —

Part 6: **Groupings**

Technologies de l'information — Identification automatique et techniques de capture de données — Identification unique —

Partie 6: Regroupements

Reference number
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Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **2**
4 Identities for individual entities **2**
5 Identities for grouping of entities **2**
6 Identity for grouping of products, units and items **2**
6.1 General 2
6.2 Maximum number of characters permissible in a unique identity 3
6.3 Permissible character sets in an identity 3
7 Implementation of coding using AIDC media **3**
Annex A (informative) **Groupings** **4**
Annex B (informative) **Identities for groupings** **6**
Annex C (informative) **Use case for identities for groupings** **8**
Bibliography **10**

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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.

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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*; Subcommittee SC 31, *Automatic identification and data capture techniques.*

This second edition cancels and replaces the first edition (ISO/IEC 15459-6:2007), which has been technically revised.

This corrected version of ISO/IEC 15459-6:2014 incorporates the following correction plus other minor editorial modifications. Clause 6.3 has been modified as follows:

"6.3 Permissible character sets in an identity

The identity shall use alphabetic, numeric and special characters from the invariant character set ISO/IEC 646, see Annex A in ISO/IEC 15459-3.

More compact data encoding may be attained by using only upper case alphabetic characters and numeric digits.

An Issuing Agency may have additional requirements on the repertoire of characters found within identities using its IAC.

Any data processing system shall be capable of processing identities using the full repertoire of characters permitted by ISO/IEC 646."

A list of all parts in the ISO/IEC 15459 series can be found on the ISO website.

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Introduction

Unique identities can occur at many different levels, at item level, on the transport unit, on the returnable transport item, at grouping levels, and elsewhere. Such entities are often handled by several parties, both public and private, throughout their lifecycle. Each of these parties must be able to identify and trace such distinct entities so that reference can be made to associated information such as quality inspection data, the chemical substance contained, the batch or lot number of parts, components or raw materials, etc.

The associated information is typically held in some kind of database. The information can be accessed using EDI exchange or another appropriate access protocol, e.g. a directory access protocol.

There are considerable benefits if the identity of the entity is represented as a bar code or other AIDC (Automatic Identification and Data Capture) media and attached to or made a constituent part of that which is being uniquely identified so that

— it can be read electronically, thus minimizing errors;

— one identity can be used by all parties;

— each party can use the identity to look up its computer files to find the data associated with the entity.

All AIDC technologies have the potential to encode an identity. It is expected that application standards, using various automatic identification technologies, will be developed based upon the identity as a prime key. These application standards, which can include additional rules for which level of identification should be used, are often made available from the Issuing Agency.

The identity for groupings of products, product packages, transport units and items defined in this part of ISO/IEC 15459, and represented in AIDC media attached to the entities (e.g. raw material, parts, transport units, finished goods, consumer products, assets, etc.), meets the needs defined in ISO/IEC 15459-3, Common Rules.

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Information technology — Automatic identification and data capture techniques — Unique identification —

Part 6: Groupings

1 Scope

This part of ISO/IEC 15459 specifies a unique string of characters for the identification of groupings of products, product packages, transport units and items. The character string is intended to be represented in a linear bar code symbol and two-dimensional symbol or other AIDC media attached to the entity to meet management needs and/or regulatory needs (e.g. customs clearance). To address these needs different types of identifiers are recognized in the various parts of ISO/IEC 15459, which allows different requirements to be met by the unique identifiers associated within the context of the specific parts of ISO/IEC 15459.

The unique identifiers for grouping or products, product packages, transport units and items enables grouping by e.g. type, characteristics, order, manufacturing, quality, location, movement, etc. to be uniquely identified. It is possible to use with other unique individual identifiers defined in other parts of ISO/IEC 15459. Encoding these unique identifiers in a data carrier enables information about the item processing to be clearly identified.

The identity for groupings is intended for "look-up" purposes, and cannot be directly used as an entity identity in the strictest sense of the definition as used, for example, in ISO/IEC 15459-1, ISO/IEC 15459-4, and ISO/IEC 15459-5.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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, *Information technology — ISO 7-bit coded character set for information interchange*

ISO/IEC 15459-1, *Information technology — Automatic identification and data capture techniques — Unique identification — Part 1: Individual transport units*

ISO/IEC 15459-2, *Information technology — Automatic identification and data capture techniques — Unique identification — Part 2: Registration procedures*

ISO/IEC 15459-3, *Information technology — Automatic identification and data capture techniques — Unique identification — Part 3: Common rules*

ISO/IEC 15459-4, *Information technology — Automatic identification and data capture techniques — Unique identification — Part 4: Individual products and product packages*

ISO/IEC 15459-5, *Information technology — Automatic identification and data capture techniques — Unique identification — Part 5: Individual returnable transport items (RTIs)*

ISO/IEC 19762-1, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary — Part 1: General terms relating to AIDC*

GS1 General Specifications

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 19762-1 and ISO/IEC 15459-3 apply.

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

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

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

4 Identities for individual entities

An individual instance of an entity is aptly identified by an identity that is different from any other identity. The description of such a form of unique identification is described in ISO/IEC 15459-1, ISO/IEC 15459-4 and ISO/IEC 15459-5. The provisions in ISO/IEC 15459-1, ISO/IEC 15459-4 or ISO/IEC 15459-5 shall be used for individual entities.

Where unique identification for grouping of entities, which are not necessarily of the same type, is required the provisions of Clause 5 and Clause 6 of this part of ISO/IEC 15459 shall be used.

5 Identities for grouping of entities

The grouping of entities for which the type, usage, quality, or delivery, etc. is considered the same could be determined to be uniquely and distinctly identified and such a grouping should be unambiguously identified by a qualifier and string as defined in Clause 6 so that groupings can be distinguished from entities using other qualifiers.

The qualifier component of an identity for a grouping may use any data format supported by ISO/IEC 15434 or ISO/IEC 9834-1. What formats to be used are to be specified by the Issuing Agency rules. For the purpose of this standard examples are not meant to be exhaustive, but rather representative of the full suite of data qualifiers possible to use and relevant to this standard;

— GS1 Application Identifiers **01** or **402**

  If this method is used to create the identity each unique identity issuer would select the appropriate GS1 Application Identifier, conforming to the requirements of the GS1 General Specification, to act as the qualifier of the identity.

— ASC MH 10 Data Identifiers **25P**, **25T**, **25K** or **26K**

  If this method is used to create the identity each unique identity issuer would select the appropriate ASC MH10 Data Identifier as required by the appropriate Issuing Agency to act as the qualifier of the identity.

NOTE There are situations where the identity be constructed from various factors, such as the manufacturing date, materials, production facilities, operator, environmental conditions, and many kinds of parameters at the manufacturing process is required to specify the quality of an entity, dependent on the characteristics of the entity. In such a case, these factors should be reflected elsewhere in an AIDC domain; not as part of an identity but as an attribute to the identity according to this part or any other part of ISO/IEC 15459.

6 Identity for grouping of products, units and items

6.1 General

An identity is assigned to an entity (e.g. product and/or material) to enable follow up by a unique identity issuer. This shall be done in accordance with the rules established by an authorized Issuing Agency as identified in ISO/IEC 15459-3 and ISO/IEC 15459-2.

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