INTERNATIONAL STANDARD

ISO/IEC 15459-1

Third edition
2014-11-15

Corrected version
2016-09-01

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

Part 1: Individual transport units

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

Partie 1: Unités de transport individuel

Reference number
ISO/IEC 15459-1:2014(E)

© ISO/IEC 2014



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2014, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword ... **iv**
Introduction ... **v**
1 Scope ... **1**
2 Normative references ... **1**
3 Terms and definitions ... **1**
4 Qualifiers for individual transport units ... **2**
5 Identity for individual transport units ... **2**
5.1 General ... 2
5.2 Maximum number of characters permissible in an identity ... 2
5.3 Permissible character sets in an identity ... 3
6 Implementation of coding using AIDC media ... **3**
Annex A (informative) **Unique identification for transport units** ... **4**
Annex B (informative) **Examples of identities for individual transport units** ... **6**
Bibliography ... **8**

© ISO/IEC 2014 – All rights reserved

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 third edition cancels and replaces the second edition (ISO/IEC 15459-1:2006), which has been technically revised.

This corrected version of ISO/IEC 15459-1:2014 incorporates the following correction plus other minor editorial modifications. Clause 5.3 has been modified as follows:

"5.3 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.

 © ISO/IEC 2014 – All rights reserved

Introduction

Unique identification 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 individual transport units defined in this part of ISO/IEC 15459, and represented in AIDC media attached to the unit, meets the needs defined in ISO/IEC 15459-3, Common rules.

© ISO/IEC 2014 – All rights reserved

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

Part 1: Individual transport units

1 Scope

This part of ISO/IEC 15459 specifies a unique string of characters for the identification of individual transport units. The character string is intended to be represented in a bar code label or other AIDC media attached to the entity to meet management needs. To address management needs, different types of entities are recognized in the various parts of ISO/IEC 15459, which allows different requirements to be met by the identities associated with each type.

The rules for the unique identification for individual transport units, to identify physical logistical transfers, with the identity relevant for the duration of one or more items in the load being held or transported as part of that load, are defined and supported by example.

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 15459-2, *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 19762-1, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary — Part 1: General terms relating to AIDC*

GS1 General Specifications, *GS1*

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.

© ISO/IEC 2014 – All rights reserved