

Reference number of working document: **ISO/IEC JTC 1/SC 31 N 3185**

Date: 2010-05-17

Reference number of document: **ISO/IEC FCD 15459-2.3 (2010)**

Committee identification: ISO/IEC JTC 1/SC 31/WG 2

Secretariat: JISC

## **Information technology — Automatic identification and data capture techniques — Unique identification — Part 2: Registration procedures**

*Technologie d'information — Identification automatique et techniques de capture de données — Identification uniques — La partie 2: Procédures d'enregistrement*

### **Warning**

This document is not an ISO International Standard. It is distributed for review and comment. It is subject to change without notice and may not be referred to as an International Standard.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Document type: International standard - Revision  
Document subtype: if applicable  
Document stage: (30) Committee  
Document language: E

**Copyright notice**

This ISO document is a working draft or committee draft and is copyright-protected by ISO. While the reproduction of working drafts or committee drafts in any form for use by participants in the ISO standards development process is permitted without prior permission from ISO, neither this document nor any extract from it may be reproduced, stored or transmitted in any form for any other purpose without prior written permission from ISO.

Requests for permission to reproduce this document for the purpose of selling it should be addressed as shown below or to ISO's member body in the country of the requester:

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.ch](mailto:copyright@iso.ch)  
Web [www.iso.ch](http://www.iso.ch)

Reproduction for sales purposes may be subject to royalty payments or a licensing agreement.

Violators may be prosecuted.

# Contents

Page

Foreword .....	iv
1 Scope .....	1
2 Normative references .....	1
3 Terms, definitions and abbreviated terms .....	2
4 Issuing Agencies.....	2
4.1 Responsibilities.....	2
4.2 Application .....	2
4.2.1 Criteria for approval.....	3
4.2.2 Criteria for rejection.....	3
4.2.3 Appeal.....	3
5 Registration Authority .....	4
5.1 Responsibilities.....	4
5.2 Appointment.....	4
5.3 Resignation .....	4
5.4 The register of Issuing Agency Codes (IACs).....	5
5.5 Issuing Agency Code (IAC) allocation.....	5
Annex A (informative) Appeals committee .....	7
A.1 Constitution.....	7
A.2 Responsibilities.....	7
A.3 Voting procedures .....	7
Annex B (informative) Application form for Issuing Agency Code (IAC) .....	8
Bibliography .....	10

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

Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 31, *Automatic identification and data capture techniques* prepared ISO/IEC 15459-2.

ISO/IEC 15459 consists of the following parts, under the general title *Information technology — Automatic identification and data capture techniques — Unique identification*:

- *Part 1: Individual transport units*
- *Part 2: Registration procedures*
- *Part 3: Common rules*
- *Part 4: Individual products and product packages*
- *Part 5: Individual returnable transport items (RTIs)*
- *Part 6: Groupings*

## 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 information is often held on computer systems, and may be exchanged between parties involved via EDI (Electronic Data Interchange) and XML (eXtensible Markup Language) messages.

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 minimising 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 may include additional rules for which level of identification should be used, may be made available from the Issuing Agency.

The procedures and obligations to construct an identity to achieve unique identification of an entity are defined in this part of ISO/IEC 15459.



# Information technology — Automatic identification and data capture techniques — Unique identification — Part 2: Registration procedures

## 1 Scope

This part of ISO/IEC 15459 specifies the procedural requirements to maintain identities and outlines the obligations of the Registration Authority and Issuing Agencies.

This part of ISO/IEC 15459 excludes those entities where ISO has designated Maintenance Agencies or Registration Authorities to provide identity and/or identifier schemes. It does not apply to:

- freight containers, because their unique coding is specified in ISO 6346, *Freight containers — Coding, identification and marking*;
- vehicles, because their unique identification is specified in ISO 3779, *Road vehicles — Vehicle identification number (VIN) — Content and structure*;
- car radios, because their unique identification is specified in ISO 10486, *Passenger cars — Car radio identification number (CRIN)*.

The exclusion also applies to:

- ISO 2108, *Information and documentation — International standard book number (ISBN)* and ISO 3297, *Information and documentation — International standard serial number (ISSN)*;

NOTE The scope of each of ISO 2108 and ISO 3297 identifies the title rather than the individual copy of a book or periodical. As such, the level of identification achieved is at a level higher than the unique identity required with this part of ISO/IEC 15459.

## 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, *Information technology — ISO 7-bit coded character set for information interchange*

ISO 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*

ISO/IEC 15418, *Information technology — Automatic identification and data capture techniques — GS1 Application Identifiers and ASC MH 10 Data Identifiers*

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 — Part 1: General terms relating to AIDC*

GS1 General Specifications, GS1

### 3 Terms, definitions and abbreviated terms

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

## 4 Issuing Agencies

### 4.1 Responsibilities

Issuing Agencies shall:

- a) authorise any organisation wishing to allocate identities for use in entity management applications (e.g., transport unit identification or traceability of items) for which the Issuing Agency has been authorised. An individual organisation wishing to issue identities in accordance with this part of ISO/IEC 15459 shall do so through umbrella organisations such as their trade associations, or a public or state agency;
- b) define rules which ensure that no identity issuer can issue an identity which is the same as an identity which may be issued by another issuer;
- c) define rules which ensure that every identity issued with their authority shall begin with one of their Issuing Agency Codes (IACs);

NOTE The purpose of this is to ensure that, when using any given qualifier, the same string can never be issued by another issuer, no matter which agency is used, to ensure unambiguity in the total marketplace of all ISO/IEC 15459 identities.

- d) define rules so that any identity, whether constructed using one qualifier and one string or made up from a combination of two or more qualifiers and their associated strings, is only re-issued for use after the previously issued identity has ceased to be of significance to any user. The length of such period should be dependent upon the environment (application) in which the identity will be used.

### 4.2 Application

Issuing Agencies shall apply to the Registration Authority for registration and assignment of an IAC using the form shown in annex B. Application forms are also available on request from the Registration Authority, the national standards bodies, the ISO/IEC JTC 1 Secretariat and the secretariat of ISO/IEC JTC 1/SC 31. The Registration Authority may request additional information where further clarification is needed. A separate form should be submitted for every IAC requested.

The Registration Authority for ISO/IEC 15459 is:

NEN - Nederlands Normalisatie-instituut - Registration Authority of ISO/IEC 15459  
Postbus 5059  
2600 GB Delft  
THE NETHERLANDS  
E-mail: RA-ISO15459@nen.nl

Applicants shall:

- a) comply fully with the procedures for application for an IAC as contained in this part of ISO/IEC 15459;
- b) comply fully with the requirements contained in ISO/IEC 15459-3;
- c) forward to the Registration Authority a completed application form (see Annex B) and transfer the requisite fee;
- d) retain the completed application form containing the IAC assigned to the applicant by the Registration Authority;



- e) within a reasonable timeframe, preferably within 12 months of the date of assignment of the IAC, start for each qualifier for which permission has been granted to authorise any organisation who wishes to allocate identities using the IAC;
- f) maintain a database of organisations (organisational units) directly authorized by the Issuing Agency to allocate identities.

#### **4.2.1 Criteria for approval**

Applications for an IAC shall meet all the criteria for approval below and shall not comply with any of the criteria for rejection in 4.2.2.

The criteria for approval are:

- a) the IAC shall be for immediate use, preferably within 12 months of the date of issue of the IAC;
- b) the unique identity being issued using the IAC shall be for use in an open interchange environment;
- c) the applicant shall be a single organisation operating under specific legislative regulation.

#### **4.2.2 Criteria for rejection**

Any applications for an IAC shall be rejected by the Registration Authority when any of the following conditions exist:

- a) the applying organisation is not an umbrella organization such as a trade organisation or a public or state agency;
- b) the unique identity issued using the IAC assigned to the applicant would not be used in an open interchange environment;
- c) the IAC will be used solely for purposes other than to facilitate uniqueness of the identity in entity management applications for the defined qualifiers
- d) no identity will be issued for immediate use, e.g., within 12 months from the date of issue of an IAC;
- e) ineligibility of applicant;
- f) the absence of proper fee;
- g) incomplete or incomprehensible information in application.

#### **4.2.3 Appeal**

When an application has been rejected the applicant may appeal to the convenor of the ISO/IEC JTC 1/SC 31 appeals committee (see Annex A) or, if the appeals committee has rejected the request, to ISO/IEC JTC 1/SC 31. Appeal against rejection of an application shall be lodged with the appropriate body within 90 days of the date of receipt of the letter of rejection.

Where an application to become an Issuing Agency has been rejected by the Registration Authority, the following information shall be provided by the applicant to the appeals committee in support of the appeal:

- a) statement of which rejection clause (see 4.2.2) is disputed and why the applicant believes that the rejected application fulfils the criteria for approval (see 4.2.1);
- b) statement of special considerations whereby a specific requirement of the rejected application can be met, but such requirement is outside the current procedures and criteria for approval outlined in this part of ISO/IEC 15459.

## 5 Registration Authority

### 5.1 Responsibilities

The Registration Authority shall be responsible to ISO/IEC JTC 1/SC 31 and its responsibilities shall be:

- a) to receive and acknowledge applications from organisations wishing to become an Issuing Agency in accordance with this part of ISO/IEC 15459 (see 4.2);
- b) to process applications within 30 days of receipt of the application form;
- c) to notify the applicant in writing, within 30 days of receipt of the application form, as to the disposition of their application;
- d) to register applications meeting the criteria for approval set out in 4.2.1 as Issuing Agencies and assign an IAC within 30 days of receipt of the application form;
- e) to notify unsuccessful applicant organisations with reference to the relevant rejection clauses within 30 days of receipt of the application form;
- f) to forward to the appeals committee, within 30 days of receipt of the application, requests for more than one IAC or any applications where special circumstances exist;
- g) where an application is referred to the appeals committee to notify the applicant, in writing, that a reply may not be received within the usual timeframe and the reason for referring the application to the appeals committee;
- h) to notify the appeals committee, in writing, within 30 days of receipt of the application, if the application has been rejected;
- i) to maintain the database of Issuing Agency identification information (see 5.4);
- j) to produce a register of IACs (see 5.4);
- k) to submit a copy of the register of IACs, each January and July, to the secretariat of ISO/IEC JTC 1/SC 31;
- l) to retain as a permanent record copies of all applications submitted to it, along with the disposition of each application.

NOTE The Registration Authority will advise successful applicants of the IAC assigned. The applicant may not demand a specific IAC.

### 5.2 Appointment

One of the members of ISO/IEC JTC 1/SC 31, or a body approved by ISO/IEC JTC 1/SC 31, shall be appointed to act as the Registration Authority.

### 5.3 Resignation

If the Registration Authority finds it necessary to resign, twelve months notice shall be given to the ISO/IEC JTC 1/SC 31 Secretariat. The secretariat of ISO/IEC JTC 1/SC 31 shall initiate a search for a new Registration Authority. If a new Registration Authority cannot be found within twelve months, the ISO/IEC JTC 1/SC 31 secretariat shall assume the responsibilities of the Registration Authority on a temporary basis until a replacement is found.

## 5.4 The register of Issuing Agency Codes (IACs)

The Registration Authority shall maintain a database of information taken directly from the application form.

NOTE A copy of each application received shall be maintained on file by the Registration Authority.

Based on the information contained in this database, the Registration Authority shall publish a register of IACs. The register shall be published in alphabetical order (in English) of Issuing Agency names, and of IACs. The register of IACs is a publicly available document. It is available free of charge to the national members of ISO/IEC JTC 1/SC 31. It is available at a reasonable charge to all other parties.

The register of IACs shall contain the following information:

- a) name of Issuing Agency;
- b) address as indicated on the application form;
- c) IAC assigned to the Issuing Agency by the Registration Authority;
- d) which qualifiers are recommended by the Issuing Agency for use with assigned strings to create identities;
- e) the numbering structure employed by the Issuing Agency for each class.

## 5.5 Issuing Agency Code (IAC) allocation

IACs shall be allocated from the upper case character A to Z (A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z) and the numeric digits (0, 1, 2, 3, 4, 5, 6, 7, 8, 9).

- a) IACs A – J shall be reserved for organisations which are allocated a single character code. These organisations shall, in addition to the criteria for approval as set out in 4.2.1, meet the following criteria:
  - 1) be multi-national and be represented in all of the national member countries of JTC 1/SC 31;
  - 2) have official external liaison status with ISO/IEC JTC 1/SC 31;
  - 3) be a not for profit organisation;
  - 4) have a formal, long term relationship with at least five thousand issuers of unique identities.
- b) IACs with first character K shall be reserved for national public administration and shall be completed with the relevant alpha-2 country code as established by ISO 3166-1. Public administrations using the IAC K shall apply to the Registration Authority. Such application shall be accompanied by an endorsement from the National ISO/IEC Member Body if such body exists in the country;
- c) IACs with first character L-U shall be reserved for organisations which are allocated a two character IAC. These organisations must, in addition to the criteria for approval as set out in 4.2.1, meet the following criteria:
  - 1) be represented in more than three of the national member countries of ISO/IEC JTC 1/SC 31;
  - 2) have a formal, long term relationship with at least one thousand issuers of unique identities.
- d) IACs with first characters V-Z shall be reserved for organisations which are allocated a three character IAC. These organisations shall, in addition to the criteria for approval as set out in 5.2.1, meet the following criteria:
  - 1) be represented in more than one of the national member countries of ISO/IEC JTC 1/SC 31;

- 2) have a formal, long term relationship with at least one hundred issuers of unique identities.
- e) GS1 is allocated a block of IACs ranging from 0 to 9, and no other organisation shall be allocated a block.

## **Annex A** (informative)

### **Appeals committee**

#### **A.1 Constitution**

In order to effectively manage the relationship between ISO/IEC JTC 1/SC 31 and the Registration Authority, ISO/IEC JTC 1/SC 31 had established an Appeals Committee.

The Appeals Committee shall be made up of:

- a) representative of the Registration Authority who shall be a non-voting member of the Appeals Committee and shall attend all meetings;
- b) the Convenor of the Appeals Committee who shall be a non-voting member of the Appeals Committee, appointed by the P-members of ISO/IEC JTC 1/SC 31;
- c) the Secretary of the Appeals Committee who shall be a non-voting member of the Appeals Committee, appointed by the P-members of ISO/IEC JTC 1/SC 31.

In addition each P-member of ISO/IEC JTC 1/SC 31 is entitled to nominate one delegate and one alternate to the Appeals Committee. The alternate may attend all meetings, but is entitled to vote only in the absence of the principal delegate.

#### **A.2 Responsibilities**

The responsibilities of the Appeals Committee shall be:

- a) to enforce the criteria for approval and rejection of an Issuing Agency by the Registration Authority (see 4.2.1 and 4.2.2);
- b) to process within 60 days of receipt any queries arising from the Registration Authority.

#### **A.3 Voting procedures**

Any appeal will be circulated to the Appeals Committee as a postal ballot (if the convenor believes there is a case for a ballot). If the postal ballot fails, at the discretion of the convenor, a meeting of the Appeals Committee will be called. Quorum of the meeting will be those present, a majority of votes cast is required to overturn a decision of the Registration Authority.

If the Appeals Committee cannot resolve the issue after a ballot at a meeting, the matter shall be referred to ISO/IEC JTC 1/SC 31.

## Annex B (informative)

### Application form for Issuing Agency Code (IAC)

This application is submitted in accordance with ISO/IEC 15459.

#### A. TO BE COMPLETED BY APPLICANT (Issuing Agency)

Name of organisation (maximum 40 characters). Abbreviate where necessary.		
Address (maximum 60 characters), starting street, city. Abbreviate where necessary.		
Principal contact in organisation		Position
E-mail	Telephone number	Fax number
Legal status of organisation	Anticipated date of first use of IAC	
	Expected number of issuers of unique identities	
	Expected number of unique identities issued annually	
	List the countries in which you are represented (attach separate sheet)	
	Confirmation of not for profit status (if requesting a single character IAC)	
Address for correspondence/billing		
(On separate sheet(s)) For each qualifier for which usage is requested, provide details of provisions made by the application to safeguard conformance with this part of ISO/IEC 15459 (required to ensure compliance with the IA responsibilities (sub clause 4.1)) For example: functional description of application, structure, rules to prevent re-issuing of unique identities by another issuer and re-issue period.		
(On separate sheet) Details of fees and conditions imposed upon users of the IAC (required to ensure compliance with the IA responsibilities (sub clause 4.1))		
VAT NUMBER OF THE APPLICANT ( <i>if applicable</i> )		
We hereby apply for the assignment of an IAC, and state that the use of the IAC will be in accordance with this part of ISO/IEC 15459		
Signature/date		

Please return application to:

The Registration Authority

NEN - Nederlands Normalisatie-instituut - Registration Authority for ISO/IEC 15459  
Postbus 5059  
2600 GB Delft  
THE NETHERLANDS  
Fax: + 31 15 26 90 242  
E-mail: RA-IS015459@nen.nl

**B. TO BE COMPLETED BY THE REGISTRATION AUTHORITY**

Form received on	IAC	IAC issued on
Qualifiers permitted for use:		
Signature/date		

## Bibliography

- [1] ISO/IEC Directives, Part 2: *Rules for the structure and drafting of International Standards*, 2004
- [2] ISO 2108, *Information and documentation — International standard book number (ISBN)*
- [3] ISO 3297, *Information and documentation — International standard serial number (ISSN)*
- [4] ISO 3779, *Road vehicles — Vehicle identification number (VIN) — Content and structure*
- [5] ISO 6346, *Freight containers — Coding, identification and marking*
- [6] ISO 10486, *Passenger cars — Car radio identification number (CRIN)*
- [7] ISO/IEC 15418, *Information technology — Automatic identification and data capture techniques — GS1 Application Identifiers and ASC MH 10 Data Identifiers*
- [8] ISO 15394, *Packaging — Bar code and two-dimensional symbols for shipping, transport and receiving labels*
- [9] ISO 22742, *Packaging — Linear bar code and two-dimensional symbols for product packaging*
- [10] ISO/IEC 15459-1, *Information technology — Automatic identification and data capture techniques — Unique identification — Part 1: Individual transport units*
- [11] ISO/IEC 15459-4, *Information technology — Automatic identification and data capture techniques — Unique identification — Part 4: Individual products and product packages*
- [12] ISO/IEC 15459-5, *Information technology — Automatic identification and data capture techniques — Unique identification — Part 5: Individual returnable transport items (RTIs)*
- [13] ISO/IEC 15459-6, *Information technology — Automatic identification and data capture techniques — Unique identification — Part 6: Groupings*
- [14] ISO/IEC 9834-1, *Information technology — Open Systems Interconnection — Procedures for the operation of OSI Registration Authorities: General procedures and top arcs of the ASN.1 Object Identifier tree*





