INTERNATIONAL STANDARD

**ISO 19160-4**

Second edition
2023-04

# Addressing —

## Part 4: International postal address components and template language

*Adressage —*

*Partie 4: Composants et langages des modèles d'adresses postales internationales*

Reference number
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# Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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 ISO documents 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 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 of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 331, *Postal services,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement), and in collaboration with the Universal Postal Union (UPU).

This second edition cancels and replaces the first edition (ISO 19160-4:2017), which has been technically revised.

The main changes are as follows:

— "telephone number" has been added as an address element.

A list of all parts in the ISO 19160 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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# Introduction

The postal service provides letter, package and parcel delivery on a global and universal basis, without the need for mailers and recipients to enter into explicit service contracts. Postal addresses, which combine private recipient information with publicly known delivery point data, provide the mechanism through which mailers specify the intended recipient and the means by which the postal operator can fulfil its delivery commitment.

Traditionally, postal operators have been highly flexible with regard to the manner in which postal items can be addressed; any form and content of address was acceptable as long as it permitted sufficiently unambiguous determination of the delivery point. Even today, many postal operators pride themselves on their ability, using staff intelligence and local knowledge, to deliver postal items carrying incomplete or unusual address representations.

However, increasing volumes and labour cost rates long ago reached the point at which automation became not only economic, but essential. As a result, it has become more and more vital to ensure that the vast majority of postal items are addressed in a way which can be processed automatically, without risk of misinterpretation.

When mail is sent with addresses that are incorrect or incomplete, there is the possibility of undeliverable as addressed mail (UAA mail) which results in the mail being sent back to a return address, being sent on to a forwarding address or discarded as waste. All this unnecessary work has negative economic consequences.

Today, the vast majority of postal items carry printed addresses which are extracted from computer databases. Such databases need to be maintained in the face of population mobility, creation and retirement of delivery points and changes in their specification, such as renaming of streets, renumbering of properties, etc. Moreover, there is a growing need for validation of addresses in e-commerce and the tendency for organizations to exchange or trade address data and for organizations in one country to hold address data of organizations and individuals in other countries, which might use different approaches to the rendering of postal addresses.

Addresses can be rendered according to rules that differ from country to country or from one mailing event (a batch of mail, e.g. letters or monthly statements, sent by a mailer at one time) to another. This document does not impose any obligation on countries or mailers on how addresses shall be rendered but provides a language to express rendering rules recommended by postal operators for mailing purposes.

Templates specified according to this document may be used to exchange information about address rendering rules on international cross-border mail and domestic mail. These templates are available from the Universal Postal Union (UPU) for all countries which have approved them. This facilitates automated processing of mail and international e-commerce deliveries. Rendition engines based on this document are expected to produce the same results for the same addresses. This is conditional upon using approved templates with the same parameters. Even if this were not the case, consistency remains an appropriate goal.

The intended readers of this document include designers and developers of computer systems that process global postal address data including postal address rendering, those who formulate and implement international addressing policies and anyone seeking to reduce UAA mail.

This document is based on UPU S42, Version 8,[3] and has been developed with UPU. It was adopted by CEN as a replacement for EN 14142-1.

This document extends the list of address components by adding the new address element:

— telephone number.

NOTE 1 The preparatory work for this project is described in Reference [2].


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NOTE 2 This document implements a recommendation made in Reference [2] and focuses solely on addresses for postal purposes. Addresses for other purposes are described in other parts of the ISO 19160 series.

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# Addressing —

# Part 4: International postal address components and template language

## 1 Scope

This document defines key terms for postal addressing, postal address components and constraints on their use.

Specifically, this document specifies postal address components organized into three hierarchical levels:

— elements, such as organization name or postcode, which have well-defined conceptual meaning and are not themselves made up of subordinate components, though they can be sub-divided for technical purposes;

— constructs, such as organization identification, which group elements into units form a logical portion of a postal address;

— segments, such as addressee specification, which group related postal address constructs and/or postal address elements into units with a specific defined function.

This document also specifies a mechanism for the creation of sub-elements, which correspond to either sub-divisions of element content, such as door type or door indicator or to multiple occurrences and locations of elements in an address, such as levels of administrative regions.

This document does not specify the length of any component nor the value range of any component.

Moreover, this document specifies the codes to identify elements and sub-elements.

Further, this document specifies postal address rendering rules. This includes:

— identification and ordering of output lines in a rendered address;

— conditions for the selection of candidate lines;

— the order and concatenation of postal address components;

— required and optional components;

— parameters to contextualize an address for rendering;

— the formatting of the components, subject to constraints on the space available for that task.

Postal address rendering rules are represented in this document as a postal address template.

Finally, this document specifies language suitable for computer processing to formally express postal address templates.

This document does not cover the topic of data protection. Users of the document are nevertheless reminded that the storage and exchange of personal data are subject to legislation in many countries.

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## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 639-1, *Codes for the representation of names of languages — Part 1: Alpha-2 code*

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

ISO 15924, *Information and documentation — Codes for the representation of names of scripts*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

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

**3.1**
**address**
structured information that allows the unambiguous determination of an object for purposes of identification and location

[SOURCE: ISO 19160-1:2015, 4.1, modified — Examples and Notes to entry removed.]

**3.2**
**addressable object**
object that may be assigned an address

[SOURCE: ISO 19160-1:2015, 4.2]

**3.3**
**addressee**
party who is the ultimate recipient of a delivery item or service

Note 1 to entry: The addressee may be explicitly specified as part of the postal address or may be implicit. For example, in certain countries, omission of addressee information is taken as implying that delivery is to be to an individual or legal entity having legal access to the delivery point.

Note 2 to entry: Mr. or Mrs. Smith specifies that the addressee is either of two individuals, while Mr. Jones and Mrs. Smith denote that the addressee is a group of two individuals. See also role descriptor.

Note 3 to entry: The use made by the postal operator of addressee and mailee data can be dependent on the postal service applicable to the postal item. For some services, such as registered mail, the postal operator's responsibility can include ensuring that the addressee or a duly authorized representative acknowledges receipt of the postal item. In other cases, addressee data can be purely informative or used by the postal operator only for consistency checking and/or for the activation of forwarding services. In other cases, it can be used for sorting or sequencing purposes prior to delivery, for example, in the case of business mail being pre-sequenced by department or individual company official.

Note 4 to entry: In some countries, the addressee may be an abstraction such as "postal customer".


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**3.4**
**delivery**
<postal> process in which a postal item leaves the responsibility of the postal operator through being handed over to, or left for collection by, the addressee, the mailee, an authorized representative, or deposited in a private letter box accessible to one or other of these

Note 1 to entry: Delivery does not always imply receipt by the addressee or mailee.

**3.5**
**delivery address**
<postal> postal address which the postal operator is requested to use to deliver the postal item

Note 1 to entry: In the normal case, the delivery address is the same as the postal address specified by the mailer.

Note 2 to entry: In certain circumstances (e.g. unaddressed mail), the delivery address is not necessarily represented on the postal item. In this case, the delivery address is determined by the postal operator in accordance with an agreement between the operator and the mailer.

Note 3 to entry: The postal item is not always actually delivered to the requested delivery address. For example, in the case of forwarding, delivery takes place at the forwarding address.

**3.6**
**delivery point**
<postal> physical location recognized by a postal operator as a valid location at which delivery may occur

**3.7**
**mail recipient**
individual who actually receives a postal item at delivery or who first accesses the postal item if it is left for collection

Note 1 to entry: The mail recipient is normally the addressee, the mailee or an authorized representative of one of these two. However, this is not always be the case, for example, if the postal item is left for collection in a location to which third parties have access; if the addressee/mailee have moved house without leaving forwarding instructions or if the addressee or mailee specification was ambiguous and was, as a result, misinterpreted by the postal operator.

**3.8**
**mailee**
party designated in a postal address as having responsibility for ensuring that postal items reach their addressee

Note 1 to entry: Unlike the addressee, the mailee is always specified explicitly in a postal address, i.e. if a postal address does not contain a mailee, then there is no mailee.

Note 2 to entry: Notwithstanding Note 1 to entry, the mailee may be designated explicitly by use of a role descriptor or designated implicitly with no role descriptor.

Note 3 to entry: As is the case for an addressee, a mailee specified in a postal address can be ambiguous.

**3.9**
**mailer**
party who carries out one or more of the processes involved in creating, producing, finishing, inducting and paying the postage due for a postal item

**3.10**
**party**
<postal> one or more natural and/or legal persons and/or organizations without legal personality that act(s) as a single entity for the purpose of participation in a transaction associated with a postal item

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**3.11**
**postal address**
address, possibly inclusive of the explicit identity of an addressee, where the addressable object is an actual or potential delivery point for a postal item

**3.12**
**postal address component**
**component**
<postal address> constituent part of a postal address

EXAMPLE Locality, postcode, thoroughfare, premises identifier.

Note 1 to entry: The components of postal addresses are specified in 6.2, 6.3 and 6.4.

Note 2 to entry: A postal address component may be, but is not limited to, an element, a construct or a segment.

Note 3 to entry: For convenience, the preferred term "postal address component" has been shortened to the admitted term "component" throughout this document.

**3.13**
**postal address construct**
**construct**
<postal address> postal address component combining postal address elements which together form a logical portion of a postal address

Note 1 to entry: The constructs are specified in 6.2.

Note 2 to entry: For convenience, the preferred term "postal address construct" has been shortened to the admitted term "construct" throughout this document.

**3.14**
**postal address domain**
**domain**
<postal address> an area in which a set of specific postal address types and postal address renderings is prescribed by postal operators

EXAMPLE The most typical example of a postal address domain is a country where a designated postal operator provides postal delivery services.

Note 1 to entry: For convenience, the preferred term "postal address domain" has been shortened to the admitted term "domain" throughout this document.

**3.15**
**postal address element**
**element**
<postal address> postal address component that has a well-defined conceptual meaning with significance for customer or postal processing purposes and is not itself made up of subordinate components

Note 1 to entry: The elements are specified in 6.4.

Note 2 to entry: For convenience, the preferred term "postal address element" has been shortened to the admitted term "element" throughout this document.

**3.16**
**postal address element code**
**U-code**
<postal address> condensed representation for a postal address element or sub-element

Note 1 to entry: The postal address element code conforms to conventions specified in 7.2 and is relatively language-independent when compared with the element and sub-element names.


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**3.17**
**postal address sub-element**
**sub-element**
<postal address> identifier of either a sub-division of a postal address element value or one of multiple occurrences of an element in a postal address

Note 1 to entry: Postal address sub-elements are used to facilitate postal address rendering, database storage and related technical needs and should not be considered as specific cases of postal address components.

Note 2 to entry: Postal address sub-elements are further described in 6.5.

Note 3 to entry: For convenience, the preferred term "postal address sub-element" has been shortened to the admitted term "sub-element" throughout this document.

**3.18**
**postal address rendering**
**address rendition**
<postal> process in which the rendered address is created

**3.19**
**postal address segment**
**segment**
<postal address> postal address component comprising a named group of related postal address constructs and/or postal address elements with a specific defined function

Note 1 to entry: Postal address segments are specified in 6.2.

Note 2 to entry: For convenience, the preferred term "postal address segment" has been shortened to the admitted term "segment" throughout this document.

**3.20**
**postal address template**
**template**
<postal> specification of postal address renderings within a postal address domain

Note 1 to entry: A postal address template may need to include rendition instructions.

Note 2 to entry: A template also specifies constraints for syntactical correctness of postal addresses by indicating which elements are mandatory and which are optional.

Note 3 to entry: Software that interprets the rendering rules provided in the template is needed to produce rendered addresses.

Note 4 to entry: Postal address templates are further described in Clause 8.

Note 5 to entry: For convenience, the preferred term "postal address template" has been shortened to the admitted term "template" throughout this document.

**3.21**
**postal address type**
set of postal addresses composed of the same set of mandatory and optional components

Note 1 to entry: Postal address types can differ from country to country and from region to region within a country.

**3.22**
**postal item**
indivisible mailable entity in respect of which a mail service contractor accepts an obligation to provide postal services

[SOURCE: UPU Standards Glossary, 3.90, modified — Notes to entry have been removed.][5]

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**3.23**
**postal operator**
organization licensed to provide postal services to the general public

Note 1 to entry: Postal administration is a special case of postal operator.

[SOURCE: UPU Standards Glossary, 3.141][5]

**3.24**
**rendered postal address**
**rendered address**
<postal address> postal address represented as an image in the form of a rectangular shape comprising text lines in which postal address components are separated and ordered

EXAMPLE Address on mail label, order form address, address displayed on screen.

Note 1 to entry: For convenience, the preferred term "rendered postal address" has been shortened to the admitted term "rendered address" throughout this document.

**3.25**
**rendering parameter**
<postal address> information item that defines the context for postal address rendering

EXAMPLE When the despatching country and delivering country of the postal item differ, it is cross-border mailing. In this case, the full name of the delivering country is required on the last line of the rendered address. Otherwise, it is domestic mailing and the name of the country is not required on the rendered address.

Note 1 to entry: This includes guiding of rendering of postal addresses on an external medium, such as labels, data files or screens.

Note 2 to entry: Rendering parameters are specified in 8.2.

Note 3 to entry: Rendering parameters do not appear in the rendered postal address, but guide or specify the rendition process.

**3.26**
**rendition instruction**
<postal address> operation which either formats, abbreviates, re-arranges or separates elements within address lines when rendering a postal address

Note 1 to entry: Postal address rendition instructions are further described in 8.3.

## 4 Abbreviated terms

| | |
|---|---|
| CEN | European Committee for Standardization |
| ITU | International Telecommunications Union |
| PATDL | postal address template description language |
| UPU | Universal Postal Union |
| XML | extensible markup language |


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