



SLOVENSKI STANDARD
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Addressing - Part 2: Assigning and maintaining addresses for objects in the physical world (ISO 19160-2:2023)

Adressierung - Teil 2: Zuteilung und Pflege von Objektadressen in der physischen Welt (ISO 19160-2:2023)

Adressage - Partie 2: Attribution et mise à jour des adresses pour les objets du monde physique (ISO 19160-2:2023)

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35.240.69	Uporabniške rešitve IT pri poštinih storitvah	IT applications in postal services

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Addressing - Part 2: Assigning and maintaining addresses for objects in the physical world (ISO 19160-2:2023)

Adressage - Partie 2: Attribution et mise à jour des
adresses pour les objets du monde physique (ISO
19160-2:2023)

Adressierung - Teil 2: Zuteilung und Pflege von
Objektadressen in der physischen Welt (ISO 19160-
2:2023)

This European Standard was approved by CEN on 27 October 2023.

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European foreword

This document (EN ISO 19160-2:2023) has been prepared by Technical Committee ISO/TC 211 "Geographic information/Geomatics" in collaboration with Technical Committee CEN/TC 287 "Geographic Information" the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2024, and conflicting national standards shall be withdrawn at the latest by May 2024.

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INTERNATIONAL
STANDARD

ISO
19160-2

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Addressing —

Part 2:

**Assigning and maintaining addresses
for objects in the physical world**

Adressage —

*Partie 2: Attribution et mise à jour des adresses pour les objets du
monde physique*

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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 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).

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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 287, *Geographic Information*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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.

Introduction

An address is structured information that allows the unambiguous determination of an object for purposes of identification and location (ISO 19160-1:2015). The objects exist in the physical world (i.e. virtual objects are excluded) and can be outdoor (e.g. a building) or indoor (e.g. an office inside a building).

Addresses provide one of the most common ways to locate and identify an object in the physical world. They are essential for the management of cities, for governance and public administration generally, for service delivery in the public and private sector, and they can give people status or (legal) identity in society. They also play an important role in detecting emerging hotspots and clusters of infected cases during an epidemic or pandemic. Yet, in many parts of the world, addresses do not exist or are poorly maintained, and even if they exist, corresponding address data is often lacking or incomplete. Many stakeholders are involved in address assignment and maintenance, including local governments, postal operators, geographic naming councils, people who live or work at an address, and users of addresses, such as banks, local and national governments, e-commerce, and service providers for utilities, deliveries and emergency response.

This document specifies how to plan, implement and maintain addresses and corresponding address data in order to gain maximum benefits for governance and society in the long run. The aim of this document is to facilitate the design, planning and implementation of address assignment and maintenance by specifying requirements and recommendations for objectives, principles, good practice and a governance framework for assigning and maintaining addresses based on international good practice. Where regional or national standards already exist, this document can complement them.

This document supports the first goal of the United Nations Global Geospatial Information Management (UN-GGIM) Integrated Geospatial Information Framework (IGIF) (<http://ggim.un.org/>), namely, enabling geospatial (address) information governance, policy and institutional arrangements that ensure effective geospatial (address) information management, accommodate individual organizational requirements and arrangements, and that are aligned to national and global policy frameworks.

This document supports the Universal Postal Union's initiative, "Addressing the World – An Address for Everyone", which promotes the establishment of national addressing infrastructures to the benefit of all. The document is also useful for those involved in slum upgrading, as addresses are often assigned when housing conditions in settlements are being improved.

In many Euro-centric countries, reference to a road network in the address is common, while addresses in countries such as Japan comprise a hierarchy of administrative areas without reference to a thoroughfare. In countries with vast tracts of land, an address can comprise only a place name or the name of an oasis in a desert. Therefore, this document does not intend to promote uniform addresses across the world. It specifies good governance and management practices for any kind of address so that challenges related to address assignment and maintenance can be resolved consistently and sustainably. The requirements and recommendations in this document are aimed at upholding a long-lasting addressing infrastructure that meets today's needs for addressing, but can also be used by future generations.

This document is part of the ISO 19160 series on addressing. The other parts in the ISO 19160 series include:

- ISO 19160-1, *Addressing – Part 1: Conceptual model*, which lays out a conceptual model for address information (address model), and provides terms and definitions that describe the concepts in the model. A profile of ISO 19160-1 is a model that specifies addresses and address data for a specific country, region or application.
- ISO 19160-3, *Addressing – Part 3: Address data quality*, which establishes a set of data quality elements and measures for describing the quality of address data. ISO 19160-3 also describes procedures for reporting data quality and provides guidelines for the use of the established set of data quality elements and measures for describing the quality of address data. By using ISO 19160-3 to assess

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and describe the quality of address data, information about the quality can be shared and the data can be improved accordingly (if necessary).

- ISO 19160-4, *Addressing – Part 4: International postal address components and template language*, which defines key terms for postal addressing, postal address components and constraints on their use. ISO 19160-4 is also published as UPU S42 by the Universal Postal Union. ISO 19160-4 is a profile of ISO 19160-1, i.e. it is a conceptual model for addresses used for postal addressing.

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Addressing —

Part 2:

Assigning and maintaining addresses for objects in the physical world

1 Scope

This document focuses on assigning and maintaining addresses that allow the unambiguous determination of an object in the physical world for purposes of identification and location in the context of public administration and public service delivery. During assignment, an address is first associated with a particular object in the physical world. During maintenance, the address changes, for example, it is re-assigned to a different object, one or more of the address components are modified (e.g. a street name change), or the address is retired when it is no longer used. This document:

- a) specifies a good practice for assigning and maintaining addresses and address data; and
- b) specifies a governance framework for assigning and maintaining addresses and address data.

Very often local governments (e.g. municipalities) are assigned the mandate for the planning, implementation, evaluation and ongoing maintenance of addresses, and they are often supported by other organizations, such as the national government, a postal agency, private sector companies and national or regional organizations. This document is applicable to all organizations who have an interest, role or responsibility in address assignment and maintenance, for example in terms of:

- developing legislation, policies or regulations for addressing;
- facilitating and coordinating the naming of address components (the constituent parts of an address) and announcing and communicating these names;
- installing address component signs in the physical world;
- designing and implementing business processes related to address assignment and maintenance;
- designing, implementing and maintaining access to address data;
- developing software to facilitate the above; and
- using addresses.

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 19105, *Geographic information — Conformance and testing*

3 Terms and definitions

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

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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

EXAMPLE 1 Address where the object is a business: 611 Fifth Avenue, New York NY 10022.

EXAMPLE 2 Address where the object is a building: Lombardy House, 809 Lombardy Street, The Hills, 0039, South Africa.

EXAMPLE 3 Address where the object is a building: 411 Hannuri-daero, Sejong 30116, Republic of Korea.

EXAMPLE 4 Address where the object is a thing, e.g. an emergency water supply facility: 201-ho, 107 Samcheong-ro, Jongno-gu, Seoul 03049, Republic of Korea.

EXAMPLE 5 Address where the object is a natural object, e.g. a park: Ujung Kulon National Park, Ujunjaya, Banten, Republic of Indonesia.

Note 1 to entry: The object is identifiable in the real world, i.e. electronic and virtual addresses are excluded.

Note 2 to entry: “Identification” refers to the fact that the structured information in the address unambiguously determines the object, i.e. it helps the human to identify the object. In other words, “identification” here does not refer to unique identifiers in a database or dataset.

Note 3 to entry: There can be many addresses for an object, but at any moment (or lifecycle stage), an address unambiguously determines a single object.

Note 4 to entry: Two addresses from two different *address classes* (3.4) (i.e. they have different sets of components) for the same *addressable object* (3.2) are two different addresses.

Note 5 to entry: Two addresses for the same addressable object and from the same address class, but in two different languages are two different addresses.

Note 6 to entry: In addition to the addressable object, there may be a multitude of people, organizations, addressees or other objects associated with an address. These are external to the address model.

[SOURCE: ISO 19160-1:2015, 4.1, modified — Example 3 has been modified. Example 4 has been added. Notes 3, 4, 5 and 6 to entry have been shortened.]

3.2
addressable object
 object that may be assigned an *address* (3.1)

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

3.3
address assignment method
 way in which addresses are assigned according to the rules of an *address reference system* (3.10)

3.4
address class
 description of a set of addresses that share the same *address components* (3.5), operations, methods, relationships, and semantics

EXAMPLE 1 “25 Blue Avenue Hatfield 0028” and “384 Green Street Motherville 2093” are from the same address class.

EXAMPLE 2 “PO Box 765 Goodwood 33948” and “PO Box 567 Grayville 98373” are from the same address class.