



SLOVENSKI STANDARD

SIST ENV 12661:1999

01-januar-1999

Geografske informacije - Napotki - Geografski identifikatorji

Geographic information - Referencing - Geographic identifiers

Geoinformation - Raumbezug - Geoidentifikatoren

Information géographique - Systemes de références - Identificateurs géographiques

Ta slovenski standard je istoveten z: **ENV 12661:1998**

[SIST ENV 12661:1999](https://standards.iteh.ai/catalog/standards/sist/b2ed374a-e248-452d-a2d8-10795da2fd73/sist-env-12661-1999)

<https://standards.iteh.ai/catalog/standards/sist/b2ed374a-e248-452d-a2d8-10795da2fd73/sist-env-12661-1999>

ICS:

07.040	Astronomija. Geodezija. Geografija	Astronomy. Geodesy. Geography
35.240.70	Uporabniške rešitve IT v znanosti	IT applications in science

SIST ENV 12661:1999

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST ENV 12661:1999

<https://standards.iteh.ai/catalog/standards/sist/b2ed374a-e248-452d-a2d8-10795da2fd73/sist-env-12661-1999>

EUROPEAN PRESTANDARD
PRÉNORME EUROPÉENNE
EUROPÄISCHE VORNORM

ENV 12661

October 1998

ICS 07.040; 35.240.70

Descriptors: geographic information, data processing, identification

English version

Geographic information - Referencing - Geographic identifiers

Information géographique - Systèmes de références -
Identificateurs géographiques

Geoinformation - Raumbezug - Geoidentifikatoren

This European Prestandard (ENV) was approved by CEN on 10 October 1998 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

SIST ENV 12661:1999

<https://standards.iteh.ai/catalog/standards/sist/b2ed374a-e248-452d-a2d8-10795da2fd73/sist-env-12661-1999>




EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Contents

Foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Definitions	5
4 Concepts of spatial referencing by geographic identifiers	6
4.1 Spatial referencing using geographic identifiers	6
4.2 Geographic identifiers systems	6
4.3 Locations	6
4.4 Geographic identifiers	7
5 Specification of a geographic identifiers system	7
5.1 Description of a geographic identifiers system	7
5.2 Description of location classes	8
6 Specification for a gazetteer	10
Annex A (normative) EXPRESS schema for a geographic identifiers system	12
Annex B (informative) Example of a geographic identifiers system	15
Annex C (normative) EXPRESS schema for a gazetteer	17
Annex D (informative) Example of gazetteer data	19

<https://standards.iteh.ai/catalog/standards/sist/b2ed374a-e248-452d-a2d8-10795da2fd73/sist-env-12661-1999>


 REPUBLIKA SLOVENSKO
 MINISTERSTVO ŠKOLNÍČENIA, VÝCHOVY A ŠPORTU
 Slovenská štátna štandardizácia
 Bratislava

DOKUMENT JE VYDANÝ ZA PRÁVNE
 OCHRANENÝM



Foreword

This European Prestandard has been prepared by Technical Committee CEN/TC 287 "Geographic Information", the secretariat of which is held by AFNOR.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST ENV 12661:1999

<https://standards.iteh.ai/catalog/standards/sist/b2ed374a-e248-452d-a2d8-10795da2fd73/sist-env-12661-1999>

Introduction

The positional aspect of geographic data is provided by a spatial reference, which relates the data to a position on the surface of the Earth. Spatial references fall into two categories :

- those based on coordinates (either geodetic or local), and
- those based on geographic identifiers.

With geographic identifiers, a position is referenced by a label which identifies a real world phenomenon. These spatial references are often called "indirect", or "non-coordinate" in that they are not based explicitly on coordinates. However, coordinates may separately be assigned to the representation of the objects (as geometric or topological primitives).

The purpose of this European Prestandard is to specify ways to define and describe systems of spatial references using geographic identifiers. It enables producers of data to define locations in a consistent manner, and assists users to understand the spatial references used in datasets. It enables gazetteers of instances of locations to be constructed in a consistent manner, and supports the development of other standards in the field of geographic information.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST ENV 12661:1999](https://standards.iteh.ai/catalog/standards/sist/b2ed374a-e248-452d-a2d8-10795da2fd73/sist-env-12661-1999)

<https://standards.iteh.ai/catalog/standards/sist/b2ed374a-e248-452d-a2d8-10795da2fd73/sist-env-12661-1999>

1 Scope

This European Prestandard establishes a schema for spatial referencing using geographic identifiers. It specifies how a system of geographic identifiers is described, and defines the attributes of a location and the contents of a gazetteer of locations. Spatial referencing based on coordinates is outside the scope of this standard.

This European Prestandard is applicable not only to digital data, but also to other forms of geographic data such as maps, charts and textual documents.

2 Normative references

This European Prestandard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Prestandard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

ENV 12160:1997, *Geographic information - Data Description - Spatial schema.*

EN 28601:1992, *Data elements and interchange formats - Information interchange - Representation of dates and times (ISO 8601, 1st edition 1988 and technical corrigendum 1:1991)*

iTeh STANDARD PREVIEW (standards.iteh.ai)

3 Definitions

For the purposes of this standard, the following definitions apply :

[SIST ENV 12661:1999](https://standards.iteh.ai/catalog/standards/sist/b2ed374a-e248-452d-a2d8-10795da2fd73/sist-env-12661-1999)

3.1 <https://standards.iteh.ai/catalog/standards/sist/b2ed374a-e248-452d-a2d8-10795da2fd73/sist-env-12661-1999>
gazetteer
directory of instances of locations

EXAMPLE : a gazetteer of streets in a municipality

3.2
geographic identifier
unique identifier for a location

EXAMPLES : the name of a municipality, a street reference number

3.3
geographic identifiers system
structured collection of geographic identifiers with a common theme and format

EXAMPLE : postcodes

3.4
location
identifiable part of the real world

EXAMPLES : city, street, building

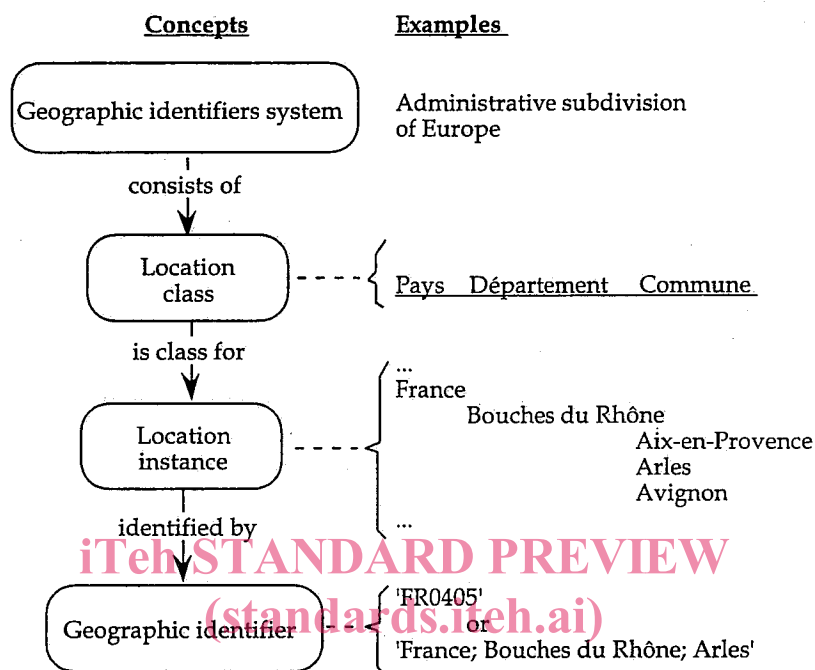
3.5
object
single phenomena existing in the real world

EXAMPLES : river, street

4 Concepts of spatial referencing by geographic identifiers

4.1 Spatial referencing using geographic identifiers

In systems of spatial referencing using geographic identifiers, a position is referenced to a real world location defined by a real world object. A real world object used for spatial referencing is termed a location, and its identifier is termed a geographic identifier. These concepts are shown in figure 1.



SIST ENV 12661:1999
<https://standards.iteh.ai/catalog/standards/sist/b2ed374a-e248-452d-a2d8-10195ca4d751c074366143691999>
Figure 1 - The concept of geographic identifiers

4.2 Geographic identifiers systems

A geographic identifiers system shall comprise a structured collection of location classes and their corresponding geographic identifiers. These locations may be related to each other through aggregation or disaggregation. Some examples of such a geographic identifiers system are as follows:

- an administrative hierarchy of national, regional and local government areas ;
- the set of centres of population in a region ;
- addresses ;
- a hydrological hierarchy of basin, river, reach and tributary.

The attributes used to describe a geographic identifiers system are listed in clause 5.

4.3 Locations

A location shall be an identifiable part of the real world. It may be considered as a zero, one or two dimensional object. Examples of locations are road junctions, streets, and cities.

NOTE A spatial unit is a two dimensional location.

A location shall be either :

- a) independent (free-standing), for example environmental protection areas,

or

- b) contiguous (providing a complete sub-division of the whole domain), for example administrative areas.

The attributes of a location type are given in clause 5.

4.4 Geographic identifiers

A geographic identifier shall be a label that uniquely identifies a location. A geographic identifier may be the name of the location, an attribute of the location or a specific identifier without any meaning specifically defined for this purpose. The description of how the geographic identifiers are defined for each location is part of the description of the geographic identifiers system. Any instance of a location may have more than one geographic identifier in different geographic identifiers systems. The set of instances of a location shall be recorded in a gazetteer. The information to be recorded for each location instance is given in clause 6.

5 Specification of a geographic identifiers system

5.1 Description of a geographic identifiers system

The description of a geographic identifiers system includes a description of the geographic identifier system itself and a description of each location type. An EXPRESS schema for a geographic identifiers system is given in Annex A, and an example in Annex B.

The attributes of a geographic identifiers system shall be as shown in table 1. For each attribute, the following information is given :

- the name of the attribute ; [SIST ENV 12661:1999](https://standards.iteh.ai/catalog/standards/sist/b2ed374a-e248-452d-a2d8-10795da2fd73/sist-env-12661-1999)
- a description ; <https://standards.iteh.ai/catalog/standards/sist/b2ed374a-e248-452d-a2d8-10795da2fd73/sist-env-12661-1999>
- constraints - mandatory (M) or optional (O) ;
- cardinality - one (1) or many (N) ;
- type - integer, string (free text), date (as defined in EN 28601), or other entity class.

Table 1 - Attributes of a geographic identifiers system

Attribute	Description	Constraint	Cardinality	Type
Name	Name of the geographic identifiers system	M	1	string
Reference date	Reference date that identifies the version of the geographic identifiers system	M	1	date
Theme	Characteristic of the geographic identifiers system (see Note 1)	M	1	string
Administrator	Authority with responsibility for the administration of the geographic identifiers system	M	1	string
Extent	Geographic domain of the geographic identifiers system (see Note 2)	M	1	string
Update frequency	Approximate frequency with which the geographic identifiers system is updated	O	1	string
Number of levels	Number of levels in the hierarchy in the geographic identifiers system	O	1	integer
Location class	Name of location class in geographic identifiers system	M	N	location_class
<p>NOTE 1 Examples of a theme for a geographic identifiers system are 'administration', 'census', 'postal'.</p> <p>NOTE 2 The extent is normally expressed by a name. Examples are "EU" for NUTS, "UK" for a postcode system.</p>				

5.2 Description of location classes

The attributes of a location class shall be as shown in table 2. For each attribute, the following information is given :

- the name of the attribute ;
- a description ;
- constraints - mandatory (M) or optional (O) ;
- cardinality - one (1) or many (N) ;
- type - integer, string (free text), date (as defined in EN 28601) or other entity class.

An EXPRESS schema for a location class is given in Annex A, and an example in Annex B.

Table 2 - Attributes of a location class

Attribute	Description	Constraint	Cardinality	Type
Location class name	Name of the location class	M	1	string
Reference date	Date at which the location class was established or was last updated	M	1	date
Theme	Characteristic of the location class	M	1	string
Connectivity	Whether the location class is independent or contiguous	M	1	enumeration of 'independent' or 'contiguous'
Location description	Way in which the instances of the location are defined (see Note 1)	M	1	string
Geographic identifier form	Naming convention for the location instances (see Note 2)	M	1	string
Geographic identifier format	Format of the geographic identifier of the location instances	M	1	string
Extent	Geographic domain of the location class (see Note 3)	M	1	string
Parent	Other location class within the geographic identifiers system, for which this location class is a sub-division	M	N	location_class
Child	Other location class within the geographic identifiers system, which sub-divides this location class	M	N	location_class
Administrator	Authority or class of authorities with overall responsibility for the location class	M	1	string
Number of instances	Number of instances of the location class	O	1	integer

NOTE 1 The location description can be defined in one of the following ways :

- a) as an aggregation of instances of other locations ;
- b) as a real-world object or a collection of real-world objects ;
- c) by a closed set of boundaries (each defined by real-world objects).

NOTE 2 Examples of geographic identifier form are 'name', 'abbreviated name', 'reference number' and 'hierarchical code'.

NOTE 3 Extent is usually expressed as a name.