
Geografske informacije - Opredelitev podatkovnih proizvodov (ISO 19131:2007)

Geographic information - Data product specifications (ISO 19131:2007)

Geoinformation - Produktspezifikationen für Geodaten (ISO 19131:2007)

Information géographique - Spécifications de contenu informationnel (ISO 19131:2007)

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EUROPEAN STANDARD
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**Geographic information - Data product specifications (ISO
19131:2007)**

Information géographique - Spécifications de contenu
informationnel (ISO 19131:2007)

Geoinformation - Produktspezifikationen für Geodaten (ISO
19131:2007)

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Foreword

The text of ISO 19131:2007 has been prepared by Technical Committee ISO/TC 211 “Geographic information/Geomatics” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 19131:2008 by Technical Committee CEN/TC 287 “Geographic Information” the secretariat of which is held by NEN.

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of an identical text or by endorsement, at the latest by October 2008, and conflicting national standards shall be withdrawn at the latest by October 2008.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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Geographic information — Data product specifications

Information géographique — Spécifications de contenu informationnel

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member 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 shall not be held responsible for identifying any or all such patent rights.

ISO 19131 was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*.

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Introduction

A data product specification is a detailed description of a dataset or dataset series together with additional information that will enable it to be created, supplied to and used by another party. It is a precise technical description of the data product in terms of the requirements that it will or may fulfil. However, the data product specification only defines how the dataset should be. For various reasons, compromises may need to be made in the implementation. The metadata associated with the product dataset should reflect how the product dataset actually is.

A data product specification may be created and used on different occasions, by different parties and for different reasons. It may, for example, be used for the original process of collecting data as well as for products derived from already existing data. It may be created by producers to specify their product or by users to state their requirements.

The purpose of this International Standard is to provide practical help in the creation of data product specifications, in conformance with other existing standards for geographic information. An aim is to produce a complete list of the items used to specify a data product.

This International Standard makes references to parts of existing standards. Some of the items used to specify the data in a data product can also be used as metadata for a resulting dataset with the same data product.

It is not necessary for a data product specification to specify the production process, but only the resulting data product. Nevertheless, it may include production and maintenance aspects if judged necessary to describe the data product.

This International Standard describes the content and structure of a data product specification. An example of a data product specification is presented in Annex F.

When an item for a data product specification is already defined in another standard of the ISO 19100 series, a reference to that document is explicitly made.

This International Standard is intended for use by producers, providers and potential users of data products.

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Geographic information — Data product specifications

1 Scope

This International Standard describes requirements for the specification of geographic data products, based upon the concepts of other ISO 19100 International Standards. It also provides help in the creation of data product specifications, so that they are easily understood and fit for their intended purpose.

2 Conformance

Any data product specification claiming conformance with this International Standard shall pass all the requirements described in the abstract test suites in Annex A.

3 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 639-2, *Code for the representation of names of languages — Part 2: Alpha-3 code*
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ISO/TS 19103, *Geographic information — Conceptual schema language*

ISO 19107, *Geographic information — Spatial schema*

ISO 19108, *Geographic information — Temporal schema*

ISO 19109:2005, *Geographic information — Rules for application schema*

ISO 19110, *Geographic information — Methodology for feature cataloguing*

ISO 19111, *Geographic information — Spatial referencing by coordinates*

ISO 19112, *Geographic information — Spatial referencing by geographic identifiers*

ISO 19113, *Geographic information — Quality principles*

ISO 19115, *Geographic information — Metadata*

ISO 19117, *Geographic information — Portrayal*

ISO 19123, *Geographic information — Schema for coverage geometry and functions*

ISO/TS 19138, *Geographic information — Data quality measures*

ISO 19131:2007(E)

4 Terms and definitions

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

4.1

application

manipulation and processing of data in support of user requirements

[ISO 19101]

4.2

application schema

conceptual schema for data required by one or more **applications**

[ISO 19101]

4.3

conceptual model

model that defines concepts of a **universe of discourse**

[ISO 19101]

4.4

conceptual schema

formal description of a **conceptual model**

[ISO 19101]

4.5

coverage

feature that acts as a function to return values from its range for any direct position within its spatial, temporal or spatiotemporal **domain**

[ISO 19123]

EXAMPLES Raster image, polygon overlay, digital elevation matrix.

4.6

data product

dataset or **dataset series** that conforms to a **data product specification**

4.7

data product specification

detailed description of a **dataset** or **dataset series** together with additional information that will enable it to be created, supplied to and used by another party

NOTE A data product specification provides a description of the universe of discourse and a specification for mapping the universe of discourse to a dataset. It may be used for production, sales, end-use or other purposes.

4.8

dataset

identifiable collection of data

[ISO 19115]

NOTE A dataset may be a smaller grouping of data which, though limited by some constraint such as spatial extent or feature type, is located physically within a larger dataset. Theoretically, a dataset may be as small as a single feature or feature attribute contained within a larger dataset. A hardcopy map or chart may be considered a dataset.

4.9**dataset series**

collection of **datasets** sharing the same product specification

[ISO 19115]

4.10**domain**

well-defined set

[ISO/TS 19103]

NOTE “Well-defined” means that the definition is both necessary and sufficient, as everything that satisfies the definition is in the set and everything that does not satisfy the definition is necessarily outside the set.

4.11**feature**

abstraction of real-world phenomena

[ISO 19101]

NOTE A feature may occur as a type or an instance. Feature type or feature instance shall be used when only one is meant.

4.12**feature association**

relationship that links instances of one **feature** type with instances of the same or a different **feature** type

[ISO 19110]

NOTE 1 A feature association may occur as a type or an instance. Feature association type or feature association instance is used when only one is meant.

NOTE 2 Feature associations include aggregation of features.

4.13**feature attribute**

characteristic of a **feature**

[ISO 19101]

NOTE 1 A feature attribute may occur as a type or an instance. Feature attribute type or feature attribute instance is used when only one is meant.

NOTE 2 A feature attribute type has a name, a data type and a domain associated with it. A feature attribute for a feature instance has an attribute value taken from the domain.

4.14**geographic data**

data with implicit or explicit reference to a location relative to the Earth

[ISO 19109]

NOTE Geographic information is also used as a term for information concerning phenomena implicitly or explicitly associated with a location relative to the Earth.