
Geographic information — Feature concept dictionaries and registers

*Information géographique — Dictionnaires de concepts d'entités et
registres*



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

This second edition cancels and replaces the first edition (ISO 19126:2009), which has been technically revised.

The main changes compared to the previous edition are as follows:

- the UML diagrams has been improved to conform to the current style and the UML to the ISO/TC 211 Harmonized Model for both the 2009 version and this document has been added;
- minor updates have been made to take into account changes to other standards, particularly ISO 19135-1.

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

This document specifies a schema for geographic feature concept dictionaries managed as registers. As described in ISO 19101-1, geographic features are abstractions of real world phenomena associated with a location relative to the surface of the earth, about which data are collected, maintained and disseminated.

A feature concept dictionary provides basic definitions and related information about a set of concepts that may be used to describe geographic features and shared across multiple application areas. Elements from a feature concept dictionary can be reused in one or more feature catalogues. A feature catalogue is often associated with a particular application schema, product specification and data set. It provides a complete textual specification of a set of feature types and their properties and relationships. See [Annex A](#) for further discussion of the relationships between feature concept dictionaries, feature catalogues, application schemas and product specifications.

ISO 19135-1 specifies procedures for the registration of items of geographic information. Items of geographic information that can be registered are members of object classes specified in other standards. This document defines object classes and specifies rules used to establish and maintain feature concept dictionaries as ISO 19135-1 conformant register schemas.

ISO 19135-1 specifies the structure of a hierarchical register in which the principal register holds a set of items that describe the subregisters. This document specifies a schema for a hierarchical register where the subregisters are feature concept dictionaries and/or feature catalogues. This document specifies an accompanying schema. The resulting hierarchical register can be used as a basis for harmonization and the establishment of interoperability between different geographic information communities.

Feature concept dictionaries and feature catalogues maintained as registers can serve as sources of reference for similar registers established by other geographic information communities as part of a system of cross-referencing. Cross-referencing between respective items in registers of items of geographic information can be difficult in cases where the structure of registers differs between information communities. This document can serve as a guide for different information communities to develop compatible registers that can support a system of geographic information cross-referencing.

Geographic information — Feature concept dictionaries and registers

1 Scope

This document specifies a schema for feature concept dictionaries to be established and managed as registers. It does not specify schemas for feature catalogues or for the management of feature catalogues as registers. However, as feature catalogues are often derived from feature concept dictionaries, this document does specify a schema for a hierarchical register of feature concept dictionaries and feature catalogues. These registers are in accordance with ISO 19135-1.

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 19103:2015, *Geographic information — Conceptual schema language*

ISO 19115-1, *Geographic information — Metadata — Part 1: Fundamentals*

ISO 19135-1:2015, *Geographic information — Procedures for item registration — Part 1: Fundamentals*

3 Terms and definitions

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

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

compound registry

registry (3.20) containing multiple *registers* (3.19) that share the same *item classes* (3.17) and coordinated management of a common characteristic

Note 1 to entry: The common characteristic can be a shared namespace for the assignment of names and/or codes.

3.2

data product

dataset or dataset series that conforms to a *data product specification* (3.3)

[SOURCE: ISO 19131:2007, 4.6]

3.3

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

[SOURCE: ISO 19131:2007, 4.7, modified — The Note has been removed.]