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STN	**Geografické informácie Všeobecný objektový model a pravidlá aplikačnej schémy (ISO 19109: 2025)**	**STN EN ISO 19109 01 9335**

Geographic information - General feature model and rules for application schema (ISO 19109:2025)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Geographic information - General feature model and rules for application schema (ISO 19109:2025)

Information géographique - Modèle général des entités et règles relatives au schéma d'application (ISO 19109:2025)

Geoinformation - Grundlegendes Datenmodell und Regeln zur Erstellung von Anwendungsschemata (ISO 19109:2025)

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Contents

Page

European foreword

This document (EN ISO 19109:2025) 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of an identical text or by endorsement, at the latest by January 2026, and conflicting national standards shall be withdrawn at the latest by January 2026.

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

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Endorsement notice

The text of ISO 19109:2025 has been approved by CEN as EN ISO 19109:2025 without any modification.

International Standard

ISO 19109

Geographic information — General feature model and rules for application schema

Information géographique — Modèle général des entités et règles relatives au schéma d'application

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Contents

Page

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).

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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 third edition cancels and replaces the second edition (ISO 19109:2015), which has been technically revised.

The main changes are as follows:

— changes in the title and scope;

— new sub-clauses discussing the concept of the General Feature Model;

— re-organization of Clause 7 to include only concepts of the General Feature Model and moving the general rules for application schema to Clause 8;

— updating the references to other ISO/TC 211 standards in applicable cases to reflect classes in respective latest versions;

— removing the dependencies to other ISO/TC 211 standards related to attributes of features.

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

Any description of reality is always an abstraction, always partial, and always just one of many possible "views", depending on the application field.

The widespread application of computers and geographic information systems (GIS) has led to an increased use of geographic data within multiple disciplines. With current technology as an enabler, society's reliance on such data is growing. Geographic datasets are increasingly being shared and exchanged. They are also used for purposes other than those for which they were produced.

To ensure that data will be understood by both computer systems and users, it is necessary to fully document the data structures for data access and exchange. The interfaces between systems, therefore, need to be defined with respect to data and operations, using the methods standardized in this document. For the construction of internal software and data storage within proprietary systems, any method is acceptable provided it supports the standardized interfaces.

An application schema provides the formal description of the data structure and content required by one or more applications. An application schema contains the descriptions of both geographic data and other related data. A fundamental concept of geographic data is the feature.

This document aims to express the importance of continuing the modelling of geospatial information according to the concepts contained in this document. The name and contact information of the maintenance agency for this document can be found at www.iso.org/maintenance_agencies.

International Standard **ISO 19109:2025(en)**

Geographic information — General feature model and rules for application schema

1 Scope

This document defines the General Feature Model (GFM) as the metamodel for creating application schemas in the context of geo-information modelling. The GFM is explained and implemented as rules for creating and documenting application schemas, including principles for the definition of features.

This document is applicable to:

— conceptual modelling of features and their properties from a universe of discourse;

— definition of application schemas;

— general rules for using a conceptual schema language for application schemas;

— rules for application schemas using UML as the conceptual schema language;

— transition from the concepts in the conceptual model to the data types in the application schema;

— integration of standardized schemas from other ISO geographic information standards with the application schema.

This document does not apply to:

— choice of one particular conceptual schema language for application schemas;

— definition of any particular application schemas;

— representation of feature types and their properties in a feature catalogue;

— representation of metadata;

— rules for mapping one application schema to another;

— implementation of the application schema in a computer environment;

— computer system and application software design;

— programming.

2 Normative references

There are no normative references in this document.