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Irish Standard
I.S. EN ISO 19109:2015

Geographic information - Rules for application schema (ISO 19109:2015)

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NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 19109

December 2015

ICS 35.240.70

Supersedes EN ISO 19109:2006

English Version

Geographic information - Rules for application schema (ISO 19109:2015)

Information géographique - Règles de schéma d'application (ISO 19109:2015)

Geoinformation - Regeln zur Erstellung von Anwendungsschemata (ISO 19109:2015)

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European foreword

This document (EN ISO 19109:2015) 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of an identical text or by endorsement, at the latest by June 2016, and conflicting national standards shall be withdrawn at the latest by June 2016.

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INTERNATIONAL STANDARD

ISO 19109

Second edition
2015-12-15

Geographic information — Rules for application schema

Information géographique — Règles de schéma d'application

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Foreword

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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. www.iso.org/directives

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The committee responsible for this document is ISO/TC 211, *Geographic information/Geomatics.*

This second edition cancels and replaces the first edition (ISO 19109:2005).

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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, the data structures for data access and exchange must be fully documented. The interfaces between systems, therefore, need to be defined with respect to data and operations, using the methods standardized in this International Standard. For the construction of internal software and data storage within proprietary systems, any method may be used that enables the standardized interfaces to be supported.

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.

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Geographic information — Rules for application schema

1 Scope

This International Standard defines rules for creating and documenting application schemas, including principles for the definition of features.

The scope of this International Standard includes the following:

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

— definition of application schemas;

— use of the conceptual schema language for application schemas;

— 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.

The following are outside the scope:

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

— definition of any particular application schema;

— 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 Conformance

2.1 General

This International Standard defines 12 conformance classes shown in Tables 1 to 12, matching the 12 requirements classes described in Clauses 7 and 8. Any application schema claiming conformance to any requirements class in this International Standard shall pass all of the tests listed in the corresponding conformance class, which are described in detail in the abstract test suites in Annex A. Each test relates to one or more specific requirements, which are explicitly indicated in the description of the test.

2.2 Meta-model

Table 1 — Meta-model conformance class

Conformance class	/conf/general
Requirements	/req/general (Clause 7, Table 15)
Tests	All tests in A.2

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