SLOVENSKI STANDARD
SIST EN ISO 19115:2005

01-april-2005

Geografske informacije – Metapodatki (ISO 19115:2003)

Geographic information - Metadata (ISO 19115:2003)

Geoinformation - Metadaten (ISO 19115:2003)

Information géographique - Métadonnées (ISO 19115:2003)

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English version

Geographic information - Metadata (ISO 19115:2003)

Information géographique - Métadonnées (ISO 19115:2003)

Geoinformation - Metadaten (ISO 19115:2003)

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Foreword

The text of ISO 19115:2003 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 19115:2005 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of an identical text or by endorsement, at the latest by July 2005, and conflicting national standards shall be withdrawn at the latest by July 2005.

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Endorsement notice

The text of ISO 19115:2003 has been approved by CEN as EN ISO 19115:2005 without any modifications.

INTERNATIONAL STANDARD

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Geographic information — Metadata

Information géographique — Métadonnées

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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 19115 was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*.

Introduction

A revival in the awareness of the importance of geography and how things relate spatially, combined with the advancement of electronic technology, have caused an expansion in the use of digital geographic information and geographic information systems worldwide. Increasingly, individuals from a wide range of disciplines outside of the geographic sciences and information technologies are capable of producing, enhancing, and modifying digital geographic information. As the number, complexity, and diversity of geographic datasets grow, a method for providing an understanding of all aspects of this data grows in importance.

Digital geographic data is an attempt to model and describe the real world for use in computer analysis and graphic display of information. Any description of reality is always an abstraction, always partial, and always just one of many possible "views". This "view" or model of the real world is not an exact duplication; some things are approximated, others are simplified, and some things are ignored. There is seldom perfect, complete, and correct data. To ensure that data is not misused, the assumptions and limitations affecting the creation of data must be fully documented. Metadata allows a producer to describe a dataset fully so that users can understand the assumptions and limitations and evaluate the dataset's applicability for their intended use.

Typically, geographic data is used by many people other than the producer. It is often produced by one individual or organization and used by another. Proper documentation will provide those unfamiliar with the data with a better understanding, and enable them to use it properly. As geographic data producers and users handle more and more data, proper documentation will provide them with a keener knowledge of their holdings and will allow them to better manage data production, storage, updating, and reuse.

The objective of this International Standard is to provide a structure for describing digital geographic data. This International Standard is intended to be used by information system analysts, program planners, and developers of geographic information systems, as well as others in order to understand the basic principles and the overall requirements for standardization of geographic information. This International Standard defines metadata elements, provides a schema and establishes a common set of metadata terminology, definitions, and extension procedures. When implemented by a data producer, this International Standard will:

1) Provide data producers with appropriate information to characterize their geographic data properly.

2) Facilitate the organization and management of metadata for geographic data.

3) Enable users to apply geographic data in the most efficient way by knowing its basic characteristics.

4) Facilitate data discovery, retrieval and reuse. Users will be better able to locate, access, evaluate, purchase and utilize geographic data.

5) Enable users to determine whether geographic data in a holding will be of use to them.

This International Standard defines general-purpose metadata, in the field of geographic information. More detailed metadata for geographic datatypes and geographic services are defined in other ISO 19100 series standards and user extensions.

Geographic information — Metadata

1 Scope

This International Standard defines the schema required for describing geographic information and services. It provides information about the identification, the extent, the quality, the spatial and temporal schema, spatial reference, and distribution of digital geographic data.

This International Standard is applicable to:

— the cataloguing of datasets, clearinghouse activities, and the full description of datasets;

— geographic datasets, dataset series, and individual geographic features and feature properties.

This International Standard defines:

— mandatory and conditional metadata sections, metadata entities, and metadata elements;

— the minimum set of metadata required to serve the full range of metadata applications (data discovery, determining data fitness for use, data access, data transfer, and use of digital data);

— optional metadata elements – to allow for a more extensive standard description of geographic data, if required;

— a method for extending metadata to fit specialized needs.

Though this International Standard is applicable to digital data, its principles can be extended to many other forms of geographic data such as maps, charts, and textual documents as well as non-geographic data.

NOTE Certain mandatory metadata elements may not apply to these other forms of data.

2 Conformance

2.1 Conformance requirements

Metadata shall be provided as specified in Clause 6 and Annexes A and B.

User-defined metadata shall be defined and provided as specified in Annex C.

Any metadata claiming conformance with this International Standard shall pass the requirements described in the abstract test suite presented in Annex D.

2.2 Metadata Profiles

Any profile conforming to this International Standard shall conform to the rules in Annex C, Clause C.6.

2.3 Obligation and condition

For the purposes of conformance testing using the abstract test suite in Annex D, metadata entities and elements shall be considered to be mandatory, conditional or optional as specified in the applicable profile.

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 (all parts), *Code for the representation of names of languages*

ISO 3166 (all parts), *Codes for the representation of names of countries and their subdivisions*

ISO 4217:2001, *Codes for the representation of currencies and funds*

ISO 8859 (parts 1 to 16), *Information technology — 8-bit single-byte coded graphic character sets*

ISO 8879, *Information processing — Text and office systems — Standard Generalized Markup Language (SGML)*

ISO/IEC 10646-1, *Information technology — Universal Multiple-Octet Coded Character Set (UCS) — Part 1: Architecture and Basic Multilingual Plane*

ISO/IEC 11179 (all parts), *Information technology — Specification and standardization of data elements*

ISO 19106:—[1)] , *Geographic information — Profiles*

ISO 19107:—[1)], *Geographic information — Spatial schema*

ISO 19108:2002, *Geographic information — Temporal schema*

ISO 19109:—[1)], *Geographic information — Rules for application schema*

ISO 19110:—[1)], *Geographic information — Methodology for feature cataloguing*

ISO 19111:2003, *Geographic information — Spatial referencing by coordinates*

ISO 19112:—[1)], *Geographic information — Spatial referencing by geographic identifiers*

ISO 19113:2002, *Geographic information — Quality principles*

ISO 19114:—[1)], *Geographic information — Quality evaluation procedures*

ISO 19117:—[1)], *Geographic information — Portrayal*

ISO 19118:—[1)], *Geographic information — Encoding*

1) To be published.

4 Terms and definitions

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

NOTE The terms and definitions used in conjunction with the UML models are addressed in Clause 5.

4.1
data type
specification of a value domain with operations allowed on values in this domain [ISO 19103]

EXAMPLE Integer, Real, Boolean, String, Date, and GM_Point.

NOTE A data type is identified by a term, e.g. Integer.

4.2
dataset
identifiable collection of data

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.

4.3
dataset series
collection of datasets sharing the same product specification

4.4
grid
network composed of two or more sets of curves in which the member of each set intersect the members of the other sets in an algorithmic way [ISO 19123]

4.5
metadata
data about data

4.6
metadata element
discrete unit of metadata

NOTE 1 Metadata elements are unique within a metadata entity.

NOTE 2 Equivalent to an attribute in UML terminology.

4.7
metadata entity
set of metadata elements describing the same aspect of data

NOTE 1 May contain one or more metadata entities.

NOTE 2 Equivalent to a class in UML terminology.

4.8
metadata section
subset of metadata which consists of a collection of related metadata entities and metadata elements

NOTE Equivalent to a package in UML terminology.

4.9
model
abstraction of some aspects of a universe of discourse [ISO 19109]