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Osnove (ISO/DIS 19135-1:2013)**

Geographic information - Procedures for item registration - Part 1: Fundamentals
(ISO/DIS 19135-1:2013)

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Principes de base (ISO/DIS 19135-1:2013)

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Geographic information — Procedures for item registration —

Part 1: Fundamentals

*Information géographique — Procédures pour l'enregistrement d'éléments —
Partie 1: Principes de base*

[Revision of first edition (ISO 19135:2005)]

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ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.



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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 19135-1 was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*.

This second edition cancels and replaces the first edition (ISO 19135:2005), which has been technically revised.

ISO 19135 consists of the following parts, under the general title *Geographic information — Procedures for item registration*:

— *Part 1: Fundamentals*

— *Part 2: XML Schema Implementation*

Introduction

This part of ISO 19135 specifies procedures for the registration of items of geographic information. ISO/IEC JTC 1 defines registration as the assignment of an unambiguous name to an object in a way that makes the assignment available to interested parties. Items of geographic information that may be registered are members of object classes specified in technical standards such as those developed by ISO/TC 211.

NOTE 1 In this International Standard, the definition of registration has been changed so that registration is the assignment of linguistically independent identifiers, rather than names, to items of geographic information.

Registration of items of geographic information offers several benefits to the geographic information community. Registration:

- a) supports wider use of registered items both by providing international recognition to the fact that such items conform to an ISO International Standard and by making them publicly available to potential users;
- b) provides both immediate recognition to extensions of an International Standard and a source for updates to that International Standard during the regular maintenance cycle;
- c) may provide a single mechanism to access information concerning items that are specified in different standards;
- d) provides a mechanism for managing temporal change;

NOTE 2 Items specified in a standard or in a register may change over time either due to changes in technology or for other reasons. Published standards do not clearly document what changes may have occurred, and do not include information about earlier versions of specified items. Such information can be maintained in a register.

- e) may be used to make sets of standardized tags available for encoding of registered items in data sets; and
- f) supports cultural and linguistic adaptability by providing both a means for recording equivalent names of items used in different languages, cultures, application areas and professions, and a means for making those equivalent names publicly available.

This part of ISO 19135 specifies procedures to be followed in preparing and maintaining registers of items of geographic information. Any organization may choose to establish registers of items of geographic information that conform to this part of ISO 19135. Informative Annex C is particularly applicable to registers established under the auspices of ISO/TC 211.

A goal of this part of ISO 19135 is to achieve a balance between minimizing the number of registers for items of geographic information and minimizing the burden on the registration authorities.

Following experience of setting up registers in user communities, there are fewer requirements in this version than previously. Because of this, implementations of the previous edition of ISO 19135 should be conformant to this part of ISO 19135. A log of changes from the previous version (ISO 19135:2005) is provided in Annex F.

Geographic information — Procedures for item registration — Part 1: Fundamentals

1 Scope

This part of ISO 19135 specifies procedures to be followed in establishing, maintaining and publishing registers of unique, unambiguous and permanent identifiers and meanings that are assigned to items of geographic information. In order to accomplish this purpose, this part of ISO 19135 specifies elements that are necessary to manage the registration of these items.

2 Conformance

2.1 Introduction

This part of ISO 19135 defines three conformance classes for registers:

- Core schema – the minimum requirements for establishing, maintaining and publishing registers
- Extended schema – additional requirements to be conformant to the most frequently used model elements in the previous edition (ISO 19135:2005)
- Hierarchical register

To conform to this part of ISO 19135, a register of items of geographic information shall satisfy all of the requirements specified in one of the three conformance levels described below, with the corresponding abstract test suite given in Annex A.

2.2 Core conformance class

Table 1 defines the characteristics of the core conformance class.

Table 1 — Core conformance class

| | |
|------------------------------|---|
| Conformance class identifier | core |
| Standardization target | registers |
| Dependency | ISO 19103: Conformance classes UML 2, Model documentation ISO 19115-1: Clause 2 Conformance requirements |
| Requirements | All requirements in Clauses 5 to 7 |
| Tests | All tests in A.1 |

2.3 Extended Conformance class

Table 2 defines the characteristics for the extended conformance class.

Table 2 — Extended conformance class

| | |
|------------------------------|-----------------------------|
| Conformance class identifier | extended-schema |
| Standardization target | registers |
| Dependency | hierarchical |
| Requirements | All requirements in Annex B |
| Tests | All tests in A.2 |

2.4 Hierarchical register conformance class

Table 3 defines the characteristics of the conformance class for hierarchical registers.

Table 3 — Hierarchical register conformance class

| | |
|------------------------------|------------------------------|
| Conformance class identifier | hierarchical |
| Standardization target | registers |
| Dependency | core |
| Requirements | All requirements in Clause 8 |
| Tests | All tests in A.3 |

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/TS 19103:2005¹⁾, *Geographic information — Conceptual schema language*

ISO 19115-1:2013: *Geographic information — Metadata — Part 1: Fundamentals*

4 Terms, definitions and abbreviations

4.1 Terms and definitions

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

4.1.1 clarification

<register> non-substantive change to a register item

Note 1 to entry: A non-substantive change does not change the semantics or technical meaning of the item. Clarification does not result in a change to the registration status of the register item.

1) ISO 19103 is a revision of ISO/TS 19103:2003, currently a Committee Draft.

4.1.2**control body**

<register> group of technical experts that makes decisions regarding the content of a *register* (4.1.9)

4.1.3**geographic information**

information concerning phenomena implicitly or explicitly associated with a location relative to the Earth

[SOURCE: ISO 19101:2002, 4,16]

4.1.4**hierarchical register**

structured set of *registers* (4.1.9) for a domain of register items, composed of a *principal register* (4.1.8) and a set of *subregisters* (4.1.16)

EXAMPLE ISO 6523 is associated with a hierarchical register. The principal register contains organization identifier schemes and each subregister contains a set of organization identifiers that comply with a single organization identifier scheme.

4.1.5**identifier**

linguistically independent sequence of characters capable of uniquely and permanently identifying that with which it is associated

4.1.6**invalidation**

<register> action taken to correct a substantive error in a register item

4.1.7**item class**

set of items with common properties

Note 1 to entry: *ps*: Class is used in this context to refer to a set of instances, not the concept abstracted from that set of instances.

4.1.8**principal register**

register (4.1.9) that contains a description of each of the *subregisters* (4.1.16) in a *hierarchical register* (4.1.4)

4.1.9**register**

set of files containing *identifiers* (4.1.5) assigned to items with descriptions of the associated items

4.1.10**register manager**

organization to which management of a *register* (4.1.9) has been delegated by the *register owner* (4.1.11)

Note 1 to entry: In the case of an ISO register, the register manager performs the functions of the registration authority specified in the ISO/IEC Directives.

4.1.11**register owner**

organization that establishes a *register* (4.1.9)

4.1.12**registration**

assignment of a permanent, unique and unambiguous *identifier* (4.1.5) to an item

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4.1.13

registry

information system on which a *register* (4.1.9) is maintained

4.1.14

retirement

<register> declaration that a register item is no longer suitable for use in the production of new data

Note 1 to entry: The status of the retired item changes from “valid” to “retired”. A retired item is kept in the register to support the interpretation of data produced before its retirement, and has not been superseded by another item.

4.1.15

submitting organization

organization authorized by a *register owner* (4.1.11) to propose changes to the content of a *register* (4.1.9)

4.1.16

subregister

part of a *hierarchical register* (4.1.4) that contains items from a partition of a domain of information

4.1.17

supersession

<register> declaration that a register item has been retired and replaced by one or more new items

Note 1 to entry: The status of the replaced item changes from “valid” to “superseded”.

4.1.18

technical standard

<register> standard containing the definitions of *item classes* (4.1.7) requiring *registration* (4.1.12)

4.2 Abbreviations

JTC 1 Joint Technical Committee 1

TMB Technical Management Board

UML Unified Modeling Language

4.3 Notation

The conceptual schema specified in this part of ISO 19135 is described using the Unified Modeling Language (UML) (ISO/IEC 19505), following the guidance of ISO/TS 19103.

By convention within ISO/TC 211, in earlier versions of standards the names of UML classes, with the exception of basic data type classes, include a two-letter prefix that identifies the standard and the UML package in which the class is specified. For newer versions of ISO/TC 211 standards, this convention is no longer applied. In this part of ISO 19135 the two letter prefix of “RE” applies for classes that are continued from the previous edition. Classes and packages new to this edition do not use an abbreviation.

Several model elements used in this schema are specified in packages specified in other ISO/TC 211 standards, as shown in Table 4.

Table 4 — UML packages from ISO 19115-1

| Prefix | Package |
|--------|--|
| CI | Citation and responsible party information |
| MD | Metadata |

5 Roles and responsibilities in the management of registers

5.1 Introduction

Several organizations play a role in the management of a register (Figure 1). The roles and their relationships are illustrated as a conceptual model using UML notation.

NOTE Although they are not organizations, register and registry are included in Figure 1 because they are the basis of the roles played by the organizations included.

For some simple registers, several roles may be handled by the same organization. For example, the role of the control body could be handled by the register manager. It is up to each register to give a more detailed description of the management of roles.

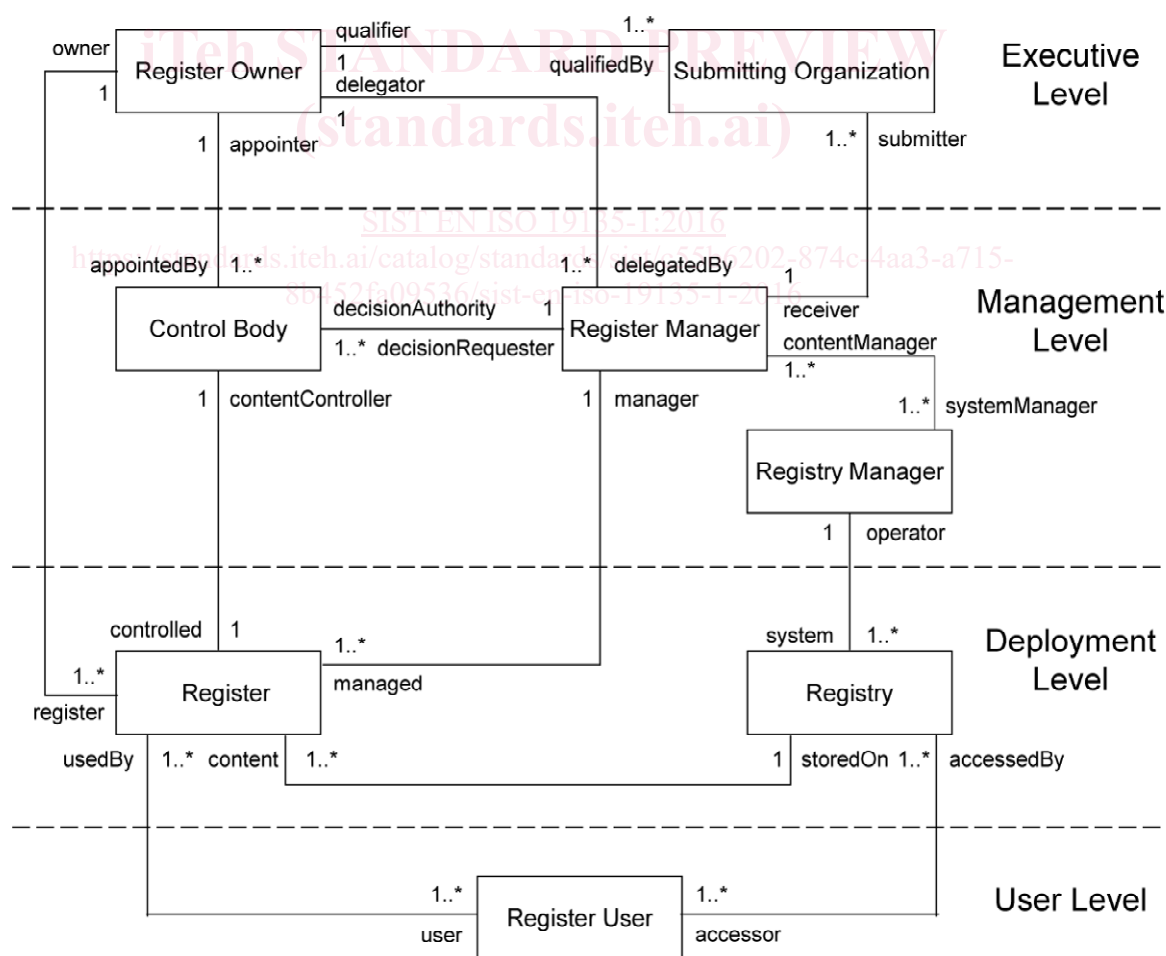


Figure 1 — Organizational relationships