

# Teknisk specifikation

## SIS-ISO/TS 19135-2:2012



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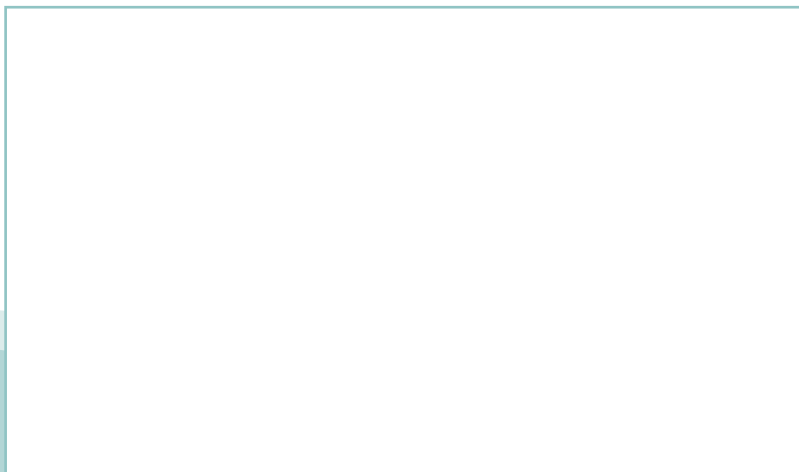
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### **Geografisk information – Procedurer för registrering – Del 2: Implementering med XML-schema (ISO/TS 19135-2:2012)**

### **Geographic information – Procedures for item registration – Part 2: XML schema implementation (ISO/TS 19135-2:2012)**



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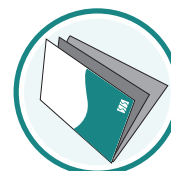
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## Foreword

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.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of document:

- an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;
- an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

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.

ISOTS 19135-2 was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*.

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

- *Part 2: XML schema implementation* [Technical Specification]

A part 1 dealing with procedures for item registration is under preparation.

## Introduction

The ISO 19135 series standardizes the procedures for the registration of geographic items. Since it does not provide any encoding for the storage and exchange of registers and register items, implementations may vary based on the interpretation of the base standard.

This Technical Specification defines an XML encoding for the storage and exchange of ISO 19135-compliant registers and register items. This encoding conforms to the rules described in ISO/TS 19139.

The encoding defined in this Technical Specification is intended to be extended to specific registers, e.g. ISO 19145<sup>1)</sup> for registers of representations of geographic point location.

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1) To be published.





# Geographic information — Procedures for item registration —

## Part 2: XML schema implementation

### 1 Scope

This Technical Specification defines Geographic ReGister XML (grg) encoding, an XML schema implementation derived from ISO 19135.

### 2 Conformance

Conformance with this Technical Specification shall be checked using all the relevant tests specified in Annex A and all the relevant tests specified in Annex A of ISO/TS 19139:2007. The framework, concepts, and methodology for testing, and the criteria to be achieved to claim conformance, are specified in ISO 19105.

### 3 Normative references

The following referenced documents are indispensable for the application of this Technical Specification. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 19135:2005, *Geographic information — Procedures for item registration*

ISO/TS 19139:2007, *Geographic information — Metadata — XML schema implementation*

### 4 Terms and definitions

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

#### 4.1

##### **namespace**

collection of names, identified by a URI reference, which are used in XML documents as element names and attribute names

NOTE See Reference [5] in the Bibliography.

#### 4.2

##### **package**

general purpose mechanism for organizing elements into groups

[ISO/TS 19103:2005, 4.2.22]

### 5 Abbreviations

UML Unified Modelling Language

URI Unique Resource Identifier

XCT XML Class Type

XML eXtensible Markup Language  
 XSD XML Schema Definition

## 6 Introduction to the encoding descriptions

This Technical Specification defines Geographic ReGister (grg) XML encoding, an XML schema implementation of the register schema defined in Clause 8 of ISO 19135:2005. This XML schema implementation of ISO 19135 follows the encoding rules stated in ISO/TS 19139:2007, Clause 8. The exceptions and the implementations based on external types are detailed in this clause. This clause uses the UML notation commonly used in ISO geographic information standards and the specific notations defined in ISO/TS 19139:2007, 5.4.

In the list below, the item on the left describes the common namespace prefix used to describe the elements in the namespace. The second item is a description in English of the namespace prefix, and the item in parentheses is the URI of the actual namespace.

grg	Geographic ReGister	( <a href="http://www.isotc211.org/2005/grg">http://www.isotc211.org/2005/grg</a> )
gco	Geographic COmmon extensible markup language	( <a href="http://www.isotc211.org/2005/gco">http://www.isotc211.org/2005/gco</a> )
gmd	Geographic MetaData extensible markup language	( <a href="http://www.isotc211.org/2005/gmd">http://www.isotc211.org/2005/gmd</a> )

## 7 XML namespaces

Figure 1 below shows the namespace used to implement ISO 19135 along with its dependencies on the namespaces defined in ISO/TS 19139 used to implement ISO 19115 and the related standards.

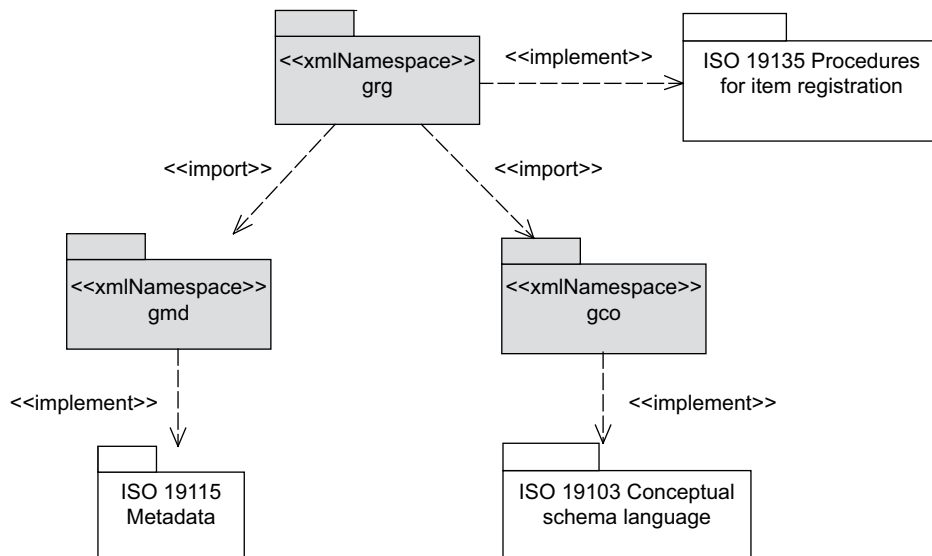
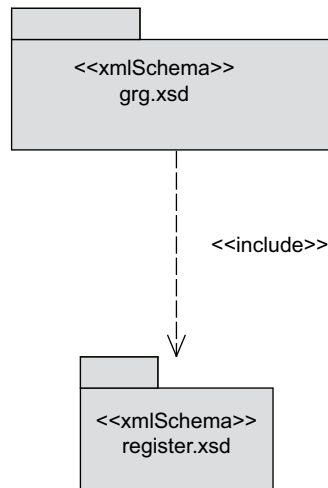


Figure 1 — XML namespaces

## 8 grg namespace

### 8.1 Organization of the grg namespace

This namespace contains the implementation of the register schema of ISO 19135. The root of this namespace is grg.xsd. Figure 2 shows the organization of the grg namespace.



**Figure 2 — Organization of grg namespace**

## 8.2 grg.xsd

This XML schema includes directly all the implemented concepts of the grg namespace, but it does not contain the declaration of any type.

## 8.3 register.xsd

### 8.3.1 Introduction

This XML schema implements all the UML classes of the register schema defined in Clause 8 of ISO 19135:2005.

The UML classes defined in ISO 19135:2005, 8.2 and 8.7 to 8.24, are implemented in XML schema following the encoding rules defined in Clause 8 of ISO/TS 19139:2007. These classes are: RE\_Register, RE\_ReferenceSource, RE\_RegisterItem, RE\_ProposalManagementInformation, RE\_AdditionInformation, RE\_ClarificationInformation, RE\_AmendmentInformation, RE\_Reference, RE\_SubregisterDescription, RE\_AlternativeExpression, RE\_AlternativeName, RE\_Locale, RE\_Version, RE\_FieldOfApplication, RE\_ItemStatus, RE\_DecisionStatus, RE\_Disposition, RE\_AmendmentType and RE\_SimilarityToSource.

Additionally, this XML schema contains two customized encodings, described in 8.3.2 and 8.3.3.

### 8.3.2 RE\_RegisterOwner, RE\_RegisterManager, and RE\_SubmittingOrganization

An abstract element `grg:AbstractRegisterStakeholder` of type `grg:AbstractRegisterStakeholder_Type` is created to share the two common attributes of classes `RE_RegisterOwner`, `RE_RegisterManager`, `RE_SubmittingOrganization` defined in ISO 19135:2005, 8.3, 8.4 and 8.5. Their XML Class Type (XCT) derives from this abstract element, as depicted in Figure 3.