SVENSK STANDARD
SS-EN ISO 19119:2006

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Geografisk information – Gränssnitt för tjänster (ISO 19119:2005)

Geographic information – Services (ISO 19119:2005)

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Europastandarden EN ISO 19119:2006 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN ISO 19119:2006.

Denna standard ersätter SS-ISO 19119:2006, utgåva 1.

The European Standard EN ISO 19119:2006 has the status of a Swedish Standard. This document contains the official English version of EN ISO 19119:2006.

This standard supersedes the Swedish Standard SS-ISO 19119:2006, edition 1.

Upplysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna upplysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.

Standarden är framtagen av kommittén för Ramverk för geodata, SIS/TK 323.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 19119

June 2006

ICS 35.240.70

English Version

Geographic information - Services (ISO 19119:2005)

Information géographique - Services (ISO 19119:2005)

Geoinformation - Dienste (ISO 19119:2005)

This European Standard was approved by CEN on 19 May 2006.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

The text of ISO 19119:2005 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 19119:2006 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 December 2006, and conflicting national standards shall be withdrawn at the latest by December 2006.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 19119:2005 has been approved by CEN as EN ISO 19119:2006 without any modifications.

Introduction

The widespread application of computers and use of geographic information systems (GIS) have led to the increased analysis of geographic data within multiple disciplines. Based on advances in information technology, society's reliance on such data is growing. Geographic datasets are increasingly being shared, exchanged, and used for purposes other than their producers' intended ones. GIS, remote sensing, automated mapping and facilities management (AM/FM), traffic analysis, geopositioning systems, and other technologies for Geographic Information (GI) are entering a period of radical integration.

This International Standard provides a framework for developers to create software that enables users to access and process geographic data from a variety of sources across a generic computing interface within an open information technology environment.

— "a framework for developers" means that this International Standard is based on a comprehensive, common (i.e. formed by consensus for general use) plan for interoperable geoprocessing;

— "access and process" means that geodata users can query remote databases and control remote processing resources, and also take advantage of other distributed computing technologies, such as software delivered to the user's local environment from a remote environment for temporary use;

— "from a variety of sources" means that users will have access to data acquired in a variety of ways and stored in a wide variety of relational and non-relational databases;

— "across a generic computing interface" means that ISO 19119 interfaces provide reliable communication between otherwise disparate software resources that are equipped to use these interfaces;

— "within an open information technology environment" means that this International Standard enables geoprocessing to take place outside of the closed environment of monolithic GIS, remote sensing, and AM/FM systems that control and restrict database, user interface, network and data manipulation functions.

Geographic information — Services

1 Scope

The scope of this International Standard is as follows:

Identification and definition of the architecture patterns for service interfaces used for geographic information and definition of the relationships to the Open Systems Environment model.

This International Standard presents a geographic services taxonomy and a list of example geographic services placed in the services taxonomy.

This International Standard prescribes how to create a platform-neutral service specification, and how to derive platform-specific service specifications that are conformant with this.

This International Standard provides guidelines for the selection and specification of geographic services from both platform-neutral and platform-specific perspectives.

2 Conformance

Any product claiming conformance with this International Standard shall pass all the requirements described in the abstract test suite given in Annex A.

NOTE The definition of an abstract test suite appears in ISO 19105.

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/IEC 10746-1:1998, *Information technology — Open Distributed Processing — Reference model: Overview — Part 1*

ISO/IEC 10746-2:1996, *Information technology — Open Distributed Processing — Reference model: Foundations*

ISO/IEC TR 14252:1996, *Information technology — Guide to the POSIX Open System Environment (OSE)*

ISO/TS 19103: —[1)], *Geographic information — Conceptual schema language*

ISO 19115:2003, *Geographic information — Metadata*

1) To be published.

4 Terms and definitions

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

4.1
service
distinct part of the functionality that is provided by an entity through **interfaces** (4.2)

[adapted from ISO/IEC TR 14252]

NOTE See 7.2 for a discussion of service.

4.2
interface
named set of **operations** (4.3) that characterize the behaviour of an entity

NOTE See 7.2 for a discussion of interface.

4.3
operation
specification of a transformation or query that an object may be called to execute

NOTE 1 An operation has a name and a list of parameters.

NOTE 2 See 7.2 for a discussion of operation.

4.4
interoperability
capability to communicate, execute programs, or transfer data among various functional units in a manner that requires the user to have little or no knowledge of the unique characteristics of those units

[ISO/IEC 2382-1]

4.5
service chain
sequence of **services** (4.1) where, for each adjacent pair of services, occurrence of the first action is necessary for the occurrence of the second action

4.6
workflow
automation of a business process, in whole or part, during which documents, information or tasks are passed from one participant to another for action, according to a set of procedural rules

4.7
viewpoint
〈**on a system**〉 form of abstraction achieved using a selected set of architectural concepts and structuring rules, in order to focus on particular concerns within a system

[ISO/IEC 10746-2]

4.8
enterprise viewpoint
viewpoint (4.7) on an ODP system and its environment that focuses on the purpose, scope and policies for that system

4.9
information viewpoint
viewpoint (4.7) on an ODP system and its environment that focuses on the semantics of information and information processing

4.10
computational viewpoint
viewpoint (4.7) on a system and its environment that enables distribution through functional decomposition of the system into objects which interact at **interfaces** (4.2)

4.11
engineering viewpoint
viewpoint (4.7) on an ODP system and its environment that focuses on the mechanisms and functions required to support distributed interaction between objects in the system

4.12
technology viewpoint
viewpoint (4.7) on an ODP system and its environment that focuses on the choice of technology in that system

4.13
distribution transparency
property of hiding from a particular user the potential behaviour of some parts of a distributed system

[ISO/IEC 10746-2]

NOTE Distribution transparencies enable complexities associated with system distribution to be hidden from applications where they are irrelevant to their purpose.

5 Abbreviated terms

ADO	ActiveX Data Objects
API	Application Programming Interface
CCM	Client Configuration Manager
COM	Component Object Model
CORBA	Common Object Request Broker Architecture
CICS	Customer Information Control System
DAG	Directed Acyclic Graph
DCOM	Distributed Component Object Model
DCP	Distributed Computing Platform
DEM	Digital Elevation Model
DNA	Distributed interNet Applications
EDOC	Enterprise Distributed Object Computing
DTD	Document type definitions
EJB	Enterprise Java Beans
EOSE	Extended Open Systems Environment Model
ERP	Enterprise Resource Planning
GIOP	General Inter-ORB Protocol
GUI	Graphic User Interface
HIS	Information Technology Human Interaction Service
HTI	Human Technology Interface
HTML	Hypertext Markup language
HTTP	Hypertext Transfer Protocol
IDL	Interface Definition Language
IIOP	Internet Inter-ORB Protocol
IIS	Internet Information Server
IT	Information Technology