

Geographic information — Conformance and testing

The European Standard EN ISO 19105:2005 has the status of a British Standard

ICS 35.240.70

National foreword

This British Standard is the official English language version of EN ISO 19105:2005. It is identical with ISO 19105:2000.

The UK participation in its preparation was entrusted to Technical Committee IST/36, Geographic information, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

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Summary of pages

This document comprises a front cover, an inside front cover, the EN ISO title page, the EN ISO foreword page, the ISO title page, pages ii to v, a blank page, pages 1 to 21 and a back cover.

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Amendments issued since publication

Amd. No.	Date	Comments
15561	28 February 2005	Implementation of the European Standard

This British Standard, having been prepared under the direction of the DISC Board, was published under the authority of the Standards Policy and Strategy Committee on 15 March 2001

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English version

Geographic information - Conformance and testing (ISO
19105:2000)

Information géographique - Conformité et essais (ISO
19105:2000)

Geoinformation - Konformität und Prüfung (ISO
19105:2000)

This European Standard was approved by CEN on 24 December 2004.

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Foreword

The text of ISO 19105:2000 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 19105:2005 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of an identical text or by endorsement, at the latest by July 2005, and conflicting national standards shall be withdrawn at the latest by July 2005.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 19105:2000 has been approved by CEN as EN ISO 19105:2005 without any modifications.

INTERNATIONAL STANDARD

ISO 19105

First edition
2000-12-15

Geographic information — Conformance and testing

Information géographique — Conformité et essais



Reference number
ISO 19105:2000(E)

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Contents

Page

Foreword.....	iv
Introduction	v
1 Scope	1
2 Conformance.....	2
2.1 Conformance requirements.....	2
2.2 Abstract test suite.....	2
3 Terms and definitions	2
4 Abbreviated terms	5
5 General framework of conformance	5
5.1 Introduction	5
5.2 Conformance clause	5
5.3 Conformance requirements.....	5
5.4 Implementation conformance statement	6
5.5 A conforming implementation.....	6
6 Conformance testing methodology	6
6.1 Introduction	6
6.2 Types of conformance tests.....	6
6.3 Implementation Extra Information for Testing.....	8
6.4 Conformance assessment	8
6.5 Intrinsic properties of the conformance assessment process	10
7 Test methods.....	11
7.1 Introduction	11
7.2 Approaches to conformance testing	11
7.3 Areas of geographic information for conformance testing.....	12
8 Abstract test suites and executable test suites	12
8.1 Introduction	12
8.2 Test purposes	13
8.3 Abstract test cases.....	13
8.4 Executable test cases	13
8.5 Relationship between abstract and executable test cases	13
Annex A (normative) Conformance clauses	14
Annex B (informative) Supporting organizations	19
Bibliography	21

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 3.

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 International Standard may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 19105 was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*.

Annex A forms a normative part of this International Standard. Annex B is for information only.

Introduction

The scope of ISO/TC 211 is standardization in the field of digital geographic information. This work aims at establishing a structured set of International Standards for information concerning objects or phenomena that are directly or indirectly associated with a location relative to the Earth. These International Standards may specify, for geographic information, methods, tools and services for data management (including definition and description), acquiring, processing, analysing, accessing, presenting and transferring such data in digital/electronic form between different users, systems and locations. The work will be linked to appropriate International Standards for information technology and data, where possible, and provide a framework for the development of sector-specific applications using geographic data.

This International Standard provides the framework, concepts, and methodology for testing and the criteria to be achieved to claim conformance to this family of International Standards. This International Standard is based in part on ISO 9646-1 which describes conformance and testing in Open Systems Interconnection (OSI), ISO 10303-31 which describes conformance and testing in industrial automation systems and integration, and ISO 10641 which describes conformance and testing for computer graphics and image processing. While the framework of conformance testing described in these three International Standards is used in this International Standard, some concepts have been modified for use in this particular domain.

The objective of standardization in the field of digital geographic information cannot be completely achieved unless data and systems can be tested to determine whether they conform to the relevant geographic information standards. Conformance testing is the testing of a candidate product for the existence of specific characteristics required by an International Standard in order to determine the extent to which that product is a conforming implementation. It involves testing the capabilities of an implementation against both the conformance requirements in the relevant International Standard(s) and the statement of the implementation's capabilities.

A framework of an abstract test suite (ATS) is standardized for relevant standards in ISO/TC 211. The standardization of ATS requires international definition and acceptance of a common test methodology, together with appropriate test methods and procedures. The purpose of this International Standard is to define this methodology, to provide a framework for specifying ATS, and to define the procedures to be followed during conformance testing.

Test methods are also addressed in this International Standard; however, any organization contemplating the use of test methods defined in this International Standard should carefully consider the constraints on their applicability. Conformance testing does not include robustness testing, acceptance testing and performance testing, because the geographic information family of standards does not establish requirements for these areas.

The main body of this International Standard is structured as follows. The general framework of conformance including the definition of a conforming implementation appears in clause 5. Conformance testing methodology is described in clause 6. The possible test methods for testing conformance to the ISO geographic information standards are discussed in clause 7. The relationship between ATS and ETS is presented in clause 8. The bibliography on conformance testing is given at the end. Guidelines for writing conformance clauses and associated templates are provided in annex A.

