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Geographic information - Services

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# Contents

Page

Foreword.....	iv
Introduction .....	v
1 Scope.....	1
2 Conformance .....	1
3 Normative references .....	1
4 Terms and definitions.....	2
5 Abbreviated terms.....	3
6 Overview of geographic services architecture .....	4
6.1 Purpose and justification .....	4
6.2 Interoperability reference model based on ISO RM-ODP .....	5
6.3 Service abstraction.....	6
6.4 Interoperability .....	7
6.5 Use of other geographic information standards in service specifications.....	8
6.6 Architecture patterns.....	8
7 Computational viewpoint: a basis for service chaining.....	9
7.1 Component and service interoperability and the computational viewpoint.....	9
7.2 Services, interfaces and operations .....	9
7.3 Service chaining.....	11
7.4 Service metadata.....	19
7.5 Service instance of unknown type .....	21
7.6 Simple service architecture .....	22
8 Information viewpoint: a basis for semantic interoperability.....	23
8.1 Information model interoperability and the information viewpoint.....	23
8.2 Extended open systems environment for geographic services .....	23
8.3 Geographic services taxonomy.....	24
8.4 ISO 19100 series of International Standards in geographic service taxonomy .....	31
8.5 Geographic service chaining validity .....	32
8.6 Services organizer folder (SOF) .....	33
9 Engineering viewpoint — A basis for distribution .....	34
9.1 Distribution transparencies and the engineering viewpoint.....	34
9.2 Distributing components using a multi-tier architecture model .....	35
10 Technology viewpoint — A basis for cross platform interoperability.....	39
10.1 Infrastructure interoperability and the technology viewpoint.....	39
10.2 Need for multiple platform-specific specifications .....	40
10.3 Conformance between platform-neutral and platform-specific service specifications .....	40
10.4 From platform-neutral to platform-specific specifications.....	41
Annex A (normative) Conformance .....	42
Annex B (informative) Example user scenarios .....	46
Annex C (normative) Data dictionary for geographic service metadata .....	49
Annex D (informative) Mapping to distributed computing platforms.....	54
Bibliography .....	66

## 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 19119 was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*.

## 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, ge positioning 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.

