# DIN EN ISO 19119:2011-07 (E)

## Geographic information - Services (ISO 19119:2005 + Amd. 1:2008); English version EN ISO 19119:2006 + A1:2011

## Contents

Page


**Foreword** ..... 3

**Foreword of A1** ..... 4

**Introduction** ..... 5

**1 Scope** ..... 6

**2 Conformance** ..... 6

**3 Normative references** ..... 6

**4 Terms and definitions** ..... 7

**5 Abbreviated terms** ..... 8

**6 Overview of geographic services architecture** ..... 9
**6.1 Purpose and justification** ..... 9
**6.2 Interoperability reference model based on ISO RM-ODP** ..... 10
**6.3 Service abstraction** ..... 11
**6.4 Interoperability** ..... 12
**6.5 Use of other geographic information standards in service specifications** ..... 13
**6.6 Architecture patterns** ..... 13

**7 Computational viewpoint: A basis for service chaining** ..... 14
**7.1 Component and service interoperability and the computational viewpoint** ..... 14
**7.2 Services, interfaces and operations** ..... 14
**7.3 Service chaining** ..... 16
**7.4 Service metadata** ..... 24
**7.5 Service instance of unknown type** ..... 27
**7.6 Simple service architecture** ..... 27

**8 Information viewpoint: A basis for semantic interoperability** ..... 28
**8.1 Information model interoperability and the information viewpoint** ..... 28
**8.2 Extended open systems environment for geographic services** ..... 29
**8.3 Geographic services taxonomy** ..... 29
**8.4 ISO 19100 series of International Standards in geographic service taxonomy** ..... 36
**8.5 Geographic service chaining validity** ..... 37
**8.6 Services organizer folder (SOF)** ..... 38

**9 Engineering viewpoint — A basis for distribution** ..... 39
**9.1 Distribution transparencies and the engineering viewpoint** ..... 39
**9.2 Distributing components using a multi-tier architecture model** ..... 40

**10 Technology viewpoint — A basis for cross platform interoperability** ..... 44
**10.1 Infrastructure interoperability and the technology viewpoint** ..... 44
**10.2 Need for multiple platform-specific specifications** ..... 45
**10.3 Conformance between platform-neutral and platform-specific service specifications** ..... 46
**10.4 From platform-neutral to platform-specific specifications** ..... 46

**Annex A** (normative) **Conformance** ..... 47

**Annex B** (informative) **Example user scenarios** ..... 51

**Annex C** (normative) **Data dictionary for geographic service metadata** ..... 54

**Annex D** (informative) **Mapping to distributed computing platforms** ..... 60

**Bibliography** ..... 72