

ISO 19101:2002-07 (E)

Geographic information - Reference model

Contents	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Conformance	1
3 Normative references	1
4 Terms and definitions	1
5 Symbols and abbreviated terms	4
5.1 Abbreviations	4
5.2 UML notation	5
6 Concepts and organization of the reference model	5
6.1 Integration of geographic information with information technology	5
6.3 Reference model organization	7
6.4 Interoperability of geographic information	8
6.4.1 Definition of interoperability	8
6.4.2 Aspects of interoperability	9
7 Conceptual modelling	10
7.1 Content of this clause	10
7.2 Definition of conceptual modelling	10
7.3 Use of this clause	11
information standards	11
7.5 The approach to conceptual modelling	11
7.6 Principles of conceptual modelling	12
7.7 Model integration	13
8 The Domain reference model	13
8.1 Content of this clause	13
8.2 Definition of Domain reference model	13
8.3 Uses of the Domain reference model	14
8.4 Overview of the Domain Reference model	14
8.5 Use of abstraction levels in the Domain reference model	16
8.6 Detailed description of the Domain reference model	17
8.6.1 Introduction	17
8.6.2 Application schema	17
8.6.3 Spatial objects and position	19
8.6.4 Reference systems	20
8.6.5 Quality	22
8.6.6 Metadata	23
8.6.7 General feature model	24
9 The Architectural reference model	25
9.1 Content of this clause	25
9.2 Definition of the Architectural reference model	26
9.3 Uses of the Architectural reference model	26

9.4	Overview of the Architectural reference model	26
9.4.1	Introduction	26
9.4.2	Services and service interfaces	26
9.4.3	Identifying services and service interfaces for geographic information	28
9.5	Types of geographic information services	28
9.5.1	Introduction	28
9.5.2	Types of information technology services relevant to geographic information	28
9.5.3	Extension of service types for geographic information	30
9.6	Service interfaces and standardization requirements	30
9.6.1	Introduction	30
9.6.2	Identifying standardization requirements for geographic information services	31
9.6.3	Fulfilling standardization requirements and the role of profiles	32
9.6.4	Elaboration of standardization requirements	32
9.6.5	Using this procedure to identify requirements for geographic information standards	33
10	Profiles and functional standards	34
10.1	Content of this clause	34
10.2	Profiles and base standards	34
10.3	Modularity concept	34
10.4	Use of profiles	34
10.5	Product specifications	34
10.6	Relationship of profiles to base standards	34
10.7	Functional standards	35
10.8	Registration of profiles	35
Annex A (informative) The Conceptual Schema Modelling Facility	36	
A.1	Introduction	36
A.2	The ISO Conceptual Schema Modelling Facility Schema architecture	36
standards	39	
Bibliography	41	