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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Conformance	1
2.1 Overview	1
2.2 Conformance classes related to Application Schemas including Observations and Measurements	1
3 Normative references	2
4 Terms and definitions	3
5 Abbreviated terms and notation	5
5.1 Abbreviated terms	5
5.2 Schema language	5
5.3 Model element names	6
6 Dependencies	6
7 Fundamental characteristics of observations	6
7.1 The context for observations	6
7.2 Observation schema	8
7.3 Use of the observation model	15
8 Specialized observations	15
8.1 Classification of observation by result type	15
8.2 Observations whose result is constant	16
8.3 Observations whose result varies	17
9 Fundamental characteristics of sampling features	19
9.1 The context for sampling	19
9.2 Sampling Schema	20
10 Spatial sampling features	24
10.1 The context for spatial sampling features	24
10.2 Spatial sampling feature schema	24
10.3 Decomposition of extensive sampling features for observations	26
10.4 Common names for sampling features (informative)	26
11 Specimens	27
11.1 The context for specimens	27
11.2 Specimen schema	27
Annex A (normative) Abstract Test Suite	30
Annex B (informative) Mapping O&M terminology to common usage	35
Annex C (normative) Utility classes	38
Annex D (informative) Best practices in use of the observation and sampling models	40
Bibliography	46

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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.

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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 19156 was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*, in collaboration with the Open Geospatial Consortium, Inc. (OGC).

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Introduction

This International Standard arises from work originally undertaken through the Open Geospatial Consortium's Sensor Web Enablement (SWE) activity. SWE is concerned with establishing interfaces and protocols that will enable a "Sensor Web" through which applications and services will be able to access sensors of all types, and observations generated by them, over the Web. SWE has defined, prototyped and tested several components needed for a Sensor Web, namely:

- Sensor Model Language (SensorML).
- Observations & Measurements (O&M).
- Sensor Observation Service (SOS).
- Sensor Planning Service (SPS).
- Sensor Alert Service (SAS).

This International Standard specifies the Observations and Measurements schema, including a schema for sampling features.

The content presented here derives from an earlier version published by Open Geospatial Consortium as OGC 07-022r1, *Observations and Measurements — Part 1 — Observation schema* and OGC 07-002r3, *Observations and Measurements — Part 2 — Sampling Features*. A technical note describing the changes from the earlier version is available from the Open Geospatial Consortium (see <http://www.opengeospatial.org/standards/om>).