Irish Standard
I.S. EN ISO 19111-2:2012

Geographic information - Spatial referencing by coordinates - Part 2: Extension for parametric values (ISO 19111-2:2009)

I.S. EN ISO 19111-2:2012

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EUROPEAN STANDARD

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English Version

Geographic information - Spatial referencing by coordinates - Part 2: Extension for parametric values (ISO 19111-2:2009)

Information géographique - Système de références spatiales par coordonnées - Partie 2: Supplément pour valeurs paramétriques (ISO 19111-2:2009)

Geoinformation - Koordinatenreferenzsysteme - Teil 2: Erweiterung auf parametrisierte Werte (ISO 19111-2:2009)

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

The text of ISO 19111-2:2009 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 19111-2:2012 by Technical Committee CEN/TC 287 “Geographic Information” the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by October 2012, and conflicting national standards shall be withdrawn at the latest by October 2012.

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Endorsement notice

The text of ISO 19111-2:2009 has been approved by CEN as a EN ISO 19111-2:2012 without any modification.

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I.S. EN ISO 19111-2:2012

INTERNATIONAL STANDARD

ISO 19111-2

First edition
2009-08-15

Geographic information — Spatial referencing by coordinates —

Part 2: Extension for parametric values

Information géographique — Système de références spatiales par coordonnées —

Partie 2: Supplément pour valeurs paramétriques

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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.

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 19111-2 was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*.

ISO 19111 consists of the following parts, under the general title *Geographic information — Spatial referencing by coordinates*:

— *Geographic information — Spatial referencing by coordinates*

— *Part 2: Extension for parametric values*

Introduction

ISO 19111 describes the elements necessary to fully define various types of reference systems used for spatial referencing by coordinates. In ISO 19111, a coordinate is one of n scalar values that define the position of a point. ISO 19111 allows for coordinates which are angular, such as latitude and longitude, or linear, such as easting and northing. It also describes the concept of a compound coordinate reference system, which uses at least two independent coordinate reference systems to describe a three-dimensional spatial position.

Scientific communities, especially those concerned with the environmental sciences, frequently express spatial position partially in terms of a parameter or function. Within these communities, this parameter or function is treated as a coordinate. Its relationship with a spatial dimension will usually be non-linear. Examples are widespread, but latitude, longitude and pressure is a commonly encountered example.

This part of ISO 19111 defines a parametric coordinate reference system using the concepts of ISO 19111. The provisions of ISO 19111 are then used to include a parametric coordinate reference system as part of a compound coordinate reference system. Optionally, time can also be included as an additional axis or as axes.

Geographic information — Spatial referencing by coordinates —

Part 2:
Extension for parametric values

1 Scope

This part of ISO 19111 specifies the conceptual schema for the description of spatial referencing using parametric values or functions. It applies the schema of ISO 19111 to combine a position referenced by coordinates with a parametric value to form a spatio-parametric coordinate reference system (CRS). The spatio-parametric CRS can optionally be extended to include time.

The intended users of this part of ISO 19111 are producers and users of environmental information.

Parameters which are attributes of spatial locations or features, but which are not involved in their spatial referencing, are not addressed by this part of ISO 19111.

2 Conformance requirements

Any CRS for which conformance to this part of ISO 19111 is claimed shall be in accordance with Annex A.

3 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the cited edition applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 19111:2007, *Geographic information — Spatial referencing by coordinates*

4 Terms and definitions

For the purposes of this document the terms and definitions of ISO 19111 and the following apply.

4.1
parametric coordinate system
one-dimensional coordinate system where the axis units are parameter values which are not inherently spatial

4.2
parametric coordinate reference system
coordinate reference system based on a parametric datum