

Australian/New Zealand Standard™

**Geographic information —
Geodetic register**



AS/NZS ISO 19127:2019

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- ANZLIC — the Spatial Information Council
- Australian Antarctic Division
- Australian Bureau of Meteorology
- Australian Bureau of Statistics
- Australian Maritime Safety Authority
- CSIRO
- Curtin University of Technology
- Department of Defence (Australian Government)
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Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-004, Geographical Information/Geomatics, to supersede AS/NZS ISO 19127:2006, *Geographic information — Geodetic codes and parameters*.

The objective of this Standard is to define the management and operations of the ISO geodetic register and identifies the data elements, in accordance with AS/NZS ISO 19111 and the core schema within AS ISO 19135.1, required within the geodetic register.

This Standard is identical with, and has been reproduced from, ISO 19127:2019, *Geographic information — Geodetic register*.

As this document has been reproduced from an International Standard, a full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*.

This first edition cancels and replaces ISO/TS 19127:2005, which has been technically revised.

The main changes compared to the previous edition are as follows:

- the title has changed from Geodetic codes and parameters to Geodetic register;
- the normative references are updated to reflect revisions, ISO 19115-1:2014 and ISO 19162:2015 are added and ISO 19112 removed;
- the Management of a register of geodetic codes and parameters clause is removed;
- the Management of a register of geodetic codes and parameters clause is replaced by Geodetic register management roles and responsibilities and Geodetic register management rules and procedures clauses with the latter referencing ISO 19135-1:2015 in specifying modified, unmodified and additional requirements;
- a Terms of reference of the control body for the ISO 19127 geodetic register clause is added;
- the Content of a register of geodetic codes and parameters clause is replaced by a Geodetic register content requirements clause which references ISO 19111:2007 and ISO 19135-1:2015 in specifying modified, unmodified and additional content;
- an ISO 19127 geodetic registry data export clause is added;
- [Annex A](#) (normative) is extended and updated to reflect revisions;
- [Annex B](#) (normative) is extended and updated to reflect the required elements within the geodetic register;
- [Annex C](#) (informative) is updated to reflect revisions and extended to include extents;
- [Annex D](#) (informative) Metadata and [Annex E](#) (informative) Requirements list are added.

In accordance with the ISO/IEC Directives, Part 2, 2018, *Rules for the structure and drafting of International Standards*, in International Standards the decimal sign is a comma on the line. However, the General Conference on Weights and Measures (*Conférence Générale des Poids et Mesures*) at its meeting in 2003 passed unanimously the following resolution:

“The decimal marker shall be either a point on the line or a comma on the line.”

In practice, the choice between these alternatives depends on customary use in the language concerned. In the technical areas of geodesy and geographic information it is customary for the decimal point always to be used, for all languages. That practice is used throughout this document.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document specifically governs procedures for the ISO 19127 geodetic register, but may have applicability to similar national and international registers of geodetic information.

The ISO 19127 geodetic register and the ISO 19127 geodetic registry are referred to as the ISO geodetic register and ISO geodetic registry, respectively, throughout this document.

ISO 19135-1:2015 specifies procedures for the registration of items of geographic information. ISO/IEC JTC 1 defines registration as the assignment of an unambiguous name to an object in a way that makes the object available to interested parties. ISO 19135-1:2015 has changed the definition of registration to the assignment of linguistically independent identifiers, rather than names, to items of geographic information. ISO 19135-1:2015, Annex C is applicable to ISO/TC 211 registers. The ISO geodetic register is one such register.

ISO 19111:2007 describes elements necessary to define single and compound coordinate reference systems so that coordinates for positions on or near the Earth's surface can be unambiguously referenced. ISO 19111:2007 also describes elements to define coordinate operations that change coordinate values from one coordinate reference system to coordinate values based on another coordinate reference system.

This document describes how the procedures specified in the core schema within ISO 19135-1:2015 are to be applied to the ISO geodetic register of elements applicable to spatial referencing by coordinates in accordance with ISO 19111:2007. Some elements that are optional in ISO 19111:2007 become mandatory in this document to provide guidance on applicability and appropriate use.

[Annex A](#), which is normative, provides four tests for conformance to this document.

[Annex B](#), which is normative, provides tables that specify information for elements to be included in the ISO geodetic register.

[Annex C](#), which is informative, provides best practices for the ISO geodetic register content.

[Annex D](#), which is informative, provides the metadata for the ISO geodetic register.

[Annex E](#), which is informative, provides a summary of the conformance requirements that are found in the text body of this document.

Australian/New Zealand Standard

Geographic information — Geodetic register

1 Scope

This document defines the management and operations of the ISO geodetic register and identifies the data elements, in accordance with ISO 19111:2007 and the core schema within ISO 19135-1:2015, required within the geodetic register.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 19115-1:2014, *Geographic information — Metadata — Part 1: Fundamentals*

ISO 19135-1:2015, *Geographic information — Procedures for item registration — Part 1: Fundamentals*

ISO 19162:2015, *Geographic information — Well-known text representation of coordinate reference systems*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 19111:2007, ISO 19135-1:2015 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

retirement

<register> declaration that a register item is no longer suitable for use in the production of new data

Note 1 to entry: The status of the retired item changes from “valid” to “retired”. A retired item is kept in the register to support the interpretation of data produced before its retirement and has not been superseded by another item.

Note 2 to entry: In the geodetic register retired items are not necessarily invalid.

[SOURCE: ISO 19135-1:2015, 4.1.14, modified — Note 2 to entry has been added.]

3.2

supersession

<register> declaration that a register item has been retired and replaced by one or more new items

Note 1 to entry: The status of the replaced item changes from “valid” to “superseded”.

Note 2 to entry: In the geodetic register superseded items are not necessarily invalid.

[SOURCE: ISO 19135-1:2015, 4.1.17, modified — Note 2 to entry has been added.]

4 Conformance

To conform to this document, the ISO geodetic register shall satisfy all of the conditions specified in [Annex A](#).