

Australian/New Zealand Standard™

**Geographic information—Registry of
representations of geographic point
location**



AS/NZS ISO 19145:2015

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-004, Geographical Information/Geomatics.

The objective of this Standard is to specify procedures to be followed in establishing, maintaining and publishing registers of unique, unambiguous and permanent identifiers, and meanings that are assigned to items of geographic information. In order to accomplish this purpose, ISO 19135:2005 specifies elements of information that are necessary to provide identification and meaning to the registered items and to manage the registration of these items.

This Standard is identical with, and has been reproduced from ISO 19145:2013, *Geographic information—Registry of representations of geographic point location*.

As this Standard is reproduced from an International Standard, the following applies:

- (a) In the source text ‘this International Standard’ should read ‘this Australian/New Zealand Standard’.
- (b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard</i>	<i>Australian/New Zealand Standard</i>
ISO	AS/NZS ISO
19115 Geographic information—Metadata	19115 Geographic information—Metadata
19118 Geographic information—Encoding	19118 Geographic information—Encoding
19135 Geographic information—Procedures for item registration	19135 Geographic information—Procedures for item registration
ISO/TS	
19103 Geographic information—Conceptual schema language	19103 Geographic information—Conceptual schema language
19135 Geographic information—Procedures for registration	19135 Geographic information—Procedures for registration
19135-2 Part 2: XML schema implementation	19135.2 Part 2: XML schema implementation
19139 Geographic information—Metadata XML schema implementation	19139 Geographic information—Metadata XML schema implementation

Only normative references that have been adopted as Australian or Australian/New Zealand Standard have been listed.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annexes to which they apply. A ‘normative’ annex is an integral part of a Standard, whereas an ‘informative’ annex is only for information and guidance.

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INTRODUCTION

ISO 6709:2008 standardizes the mechanisms for the interoperability of geographic point location representations. However, the representation of geographic point locations takes various schemes (e.g. ISO 6709:1983, DCMI Point encoding scheme, KML, GeoVRML, Natural Area Coding System, ISO 8211, GML Point Profile) depending of the application in which they are used. Accordingly, ISO 6709:2008 recognizes and supports flexibility in the representation of geographic point locations and the requirement for universal interpretation. In order to support the use of a variety of geographic point location representations, ISO 6709:2008 introduces the requirement of a registry of geographic point location representations. A registry of representations of geographic point location gives access to the description of the format in which a geographic point location is encoded and also identifies conversion services to transform the representation of the geographic point location to another representation. As such, knowing in which format a geographic point location is encoded and the format in which it must be encoded for its use by a specific application, it can be possible to perform the appropriate transformation of the representation of a geographic point location. However, this requires that encoding formats and their descriptions need to be made accessible either as part of the geographic point location representation itself or from a registry of representations of geographic point locations. As such, the definition of a standard structure for a registry of representations of geographic point location is required. Such a registry will support the required flexibility identified in ISO 6709:2008 for efficient syntactic interoperability of geographic point location information.

This International Standard defines a standard structure of a register in Unified Modelling Language (UML) that supports the description of geographic point location representation ([Clause 7](#)). It also defines the XML implementation of the register's UML structure by extending ISO/TS 19135-2, [Annex A](#). Although the structure for the description of geographic point location representation takes its roots in ISO 19135, it extends that International Standard with specific requirements to an extent that it goes beyond the definition of a profile of ISO 19135.

AUSTRALIAN/NEW ZEALAND STANDARD

Geographic information—Registry of representations of geographic point location**1 Scope**

This International Standard specifies the process for establishing, maintaining and publishing registers of representation of geographic point location in compliance with ISO 19135. It identifies and describes the information elements and the structure of a register of representations of geographic point location including the elements for the conversion of one representation to another.

This International Standard also specifies the XML implementation of the required XML extension to ISO/TS 19135-2, for the implementation of a register of geographic point location representations.

A registry of geographic point location representations differs from a coordinate reference system (CRS) registry as it is not intended to describe the parameters of a CRS including datum, projections, units of measure, and order of coordinates but is concerned by the manner a geographic point location according to ISO 6709 is physically represented in a record or part of it.

2 Conformance

To conform to this International Standard, a register of geographic point location representations shall satisfy all of the conditions specified in the abstract test suite ([Annex B](#)).

3 Normative references

The following referenced documents are indispensable for the application 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/TS 19103:2005, *Geographic information — Conceptual schema language*

ISO 19115:2003, *Geographic information — Metadata*

ISO 19118:2011, *Geographic information — Encoding*

ISO 19135:2005, *Geographic information — Procedures for item registration*

ISO/TS 19135-2:2012, *Geographic information - Procedures for item registration — Part 2: XML schema implementation*

ISO/TS 19139:2007, *Geographic information — Metadata — XML schema implementation*

W3C XMLName, *Namespaces in XML 1.0 (Second Edition)*. W3C Recommendation (16 August 2006)

W3C XMLSchema-1, *XML Schema Part 1: Structures Second Edition*. W3C Recommendation (28 October 2004)

W3C XMLSchema-2, *XML Schema Part 2: Datatypes Second Edition*. W3C Recommendation (28 October 2004)

W3C XML, *Extensible Markup Language (XML) 1.0 (Fourth Edition)*, W3C Recommendation (16 August 2006)

W3C XLink, *XML Linking Language (XLink) Version 1.0*. W3C Recommendation (27 June 2001)