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AS/NZS ISO 19112:2005

Australian/New Zealand Standard™

**Geographic information—Spatial
referencing by geographic identifiers**



AS/NZS ISO 19112:2005

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee IT-004, Geographical Information. It was approved on behalf of the Council of Standards Australia on 4 April 2005 and on behalf of the Council of Standards New Zealand on 18 March 2005.

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The following are represented on Committee IT-004:

ACT Department of Urban Services
ANZLIC-the Spatial Information Council
Association of Aerial Surveyors Australia
Association of Crown Research Institutes New Zealand
Australasian Fire Authorities Council
Australian Bureau of Statistics
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RECONFIRMATION
OF
AS/NZS ISO 19112:2005
Geographic information—Spatial referencing by geographic identifiers

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NOTES

Australian/New Zealand Standard™

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PREFACE

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

This Standard is identical with, and has been reproduced from ISO 19112:2003, *Geographic information—Spatial referencing by geographic identifiers*.

The objective of this Standard is to specify and provide geographic information system developers with defined spatial reference systems using geographic identifiers and assists in understanding the spatial references used in datasets.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard. As this Standard is reproduced from an international standard, the following applies:

- (a) Its number appears on the cover and title page while the international standard number appears only on the cover.
- (b) In the source text ‘this International Standard’ should read ‘this Australian/New Zealand Standard’.
- (c) 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	
19105	Geographic information— Conformance and testing	19105	Geographic information— Conformance and testing
19107	Geographic information—Spatial schema	19107	Geographic information—Spatial schema
19111	Geographic information—Spatial referencing by coordinates	19111	Geographic information—Spatial referencing by coordinates
19115	Geographic information—Metadata	19115	Geographic information—Metadata

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INTRODUCTION

Geographic information contains geospatial references that relate the features and information represented in the data or text to positions in geographic space. Spatial references fall into two categories:

- a) those using coordinates;
- b) those using geographic identifiers.

This International Standard deals only with spatial referencing by geographic identifiers. This type of spatial reference is sometimes called “indirect”. Spatial referencing by coordinates is the subject of ISO 19111.

Spatial reference systems using geographic identifiers are not based explicitly on coordinates but on a relationship with a location defined by a geographic feature or features. The relationship of the position to the feature may be as follows:

- a) containment, where the position is within the geographic feature, for example in a country;
- b) based on local measurements, where the position is defined relative to a fixed point or points in the geographic feature or features, for example at a given distance along a street from a junction with another street;
- c) loosely related, where the position has a fuzzy relationship with the geographic feature or features, for example adjacent to a building or between two buildings.

The purpose of this International Standard is to specify ways to define and describe systems of spatial references using geographic identifiers. However, it only covers the definition and recording of the referencing feature, and does not consider the forms of the relationship of the position relative to that feature.

AUSTRALIAN/NEW ZEALAND STANDARD

Geographic information — Spatial referencing by geographic identifiers

1 Scope

This International Standard defines the conceptual schema for spatial references based on geographic identifiers. It establishes a general model for spatial referencing using geographic identifiers, defines the components of a spatial reference system and defines the essential components of a gazetteer.

Spatial referencing by coordinates is addressed in ISO 19111. However, a mechanism for recording complementary coordinate references is included.

This International Standard enables producers of data to define spatial reference systems using geographic identifiers and assists users in understanding the spatial references used in datasets. It enables gazetteers to be constructed in a consistent manner and supports the development of other standards in the field of geographic information.

This International Standard is applicable to digital geographic data, and its principles may be extended to other forms of geographic data such as maps, charts and textual documents.

2 Conformance

Two classes of conformance are defined for this International Standard:

- any spatial reference system for which conformance with this document is claimed shall pass all the requirements described in the abstract test suite given in Clause A.1.
- any gazetteer for which conformance with this document is claimed shall pass all the requirements described in the abstract test suite given in Clause A.2.

The definition of an abstract test suite is given in ISO 19105.

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 19105:2000, *Geographic information — Conformance and testing*

ISO 19107:2003, *Geographic information — Spatial schema*

ISO 19111:2003, *Geographic information — Spatial referencing by coordinates*

ISO 19115:2003, *Geographic information — Metadata*