AS/NZS ISO 19117:2013
ISO 19117:2012

AS/NZS ISO 19117:2013

Australian/New Zealand Standard™

Geographic information—Portrayal

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee IT-004, Geographical Information/Geomatics. It was approved on behalf of the Council of Standards Australia on 29 January 2013 and on behalf of the Council of Standards New Zealand on 7 March 2013.
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The following are represented on Committee IT-004:

ANZLIC—The Spatial Information Council
Australasian Fire and Emergency Service Authorities Council
Australian Antarctic Division
Australian Hydrographic Office
Australian Map Circle
CSIRO Exploration and Mining
Department of Lands, NSW
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Geoscience Australia
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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

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Australian/New Zealand Standard™

Geographic information—Portrayal

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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 19117:2006, *Geographic information—Portrayal*.

The objective of this Standard is to specify a conceptual schema for portrayal data, in particular symbols and portrayal functions.

This Standard is identical with, and has been reproduced from ISO 19117:2012, *Geographic information—Portrayal.*

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:

Reference to International Standard		*Australian/New Zealand Standard*	
ISO		AS/NZS/ISO	
19107	Geographic information—Spatial schema	19107	Geographic information—Spatial schema
19109	Geographic information— Rules for application schema	19109	Geographic information—Rules for application schema
19110	Geographic information—Methodology for feature cataloguing	19110	Geographic information—Methodology for feature cataloguing
19111	Geographic information—Spatial referencing by coordinates	19111	Geographic information—Spatial referencing by coordinates
19115	Geographic information—Metadata	19115	Geographic information—Metadata
ISO/TS			
19103	Geographic information—Conceptual schema language	19103	Geographic information—Conceptual schema language
19139	Geographic information—Metadata—XML schema implementation	19139	Geographic information—Metadata—XML schema implementation

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

CONTENTS

INTRODUCTION

This International Standard specifies a conceptual schema for portrayal data, in particular symbols and portrayal functions. Portrayal functions associate features with symbols for the portrayal of the features on maps and other display media. This schema includes classes, attributes, associations and operations that provide a common conceptual framework that specifies the structure of and interrelationships between features, portrayal functions, and symbols. It separates the content of the data from the portrayal of that data, to allow the data to be portrayed in a manner independent of the dataset. This framework is derived from concepts found in existing portrayal implementations, and specifies a conceptual standard for use in future implementations (for example OGC Symbology Encoding and Styled Layer Descriptor Profile of WMS).

This International Standard provides an abstract model for developers of portrayal systems so that they can implement a system with the flexibility to portray geographic data to a user community in a manner that makes sense to that community.

The principal changes in this revision are to expand the concept of portrayal rules to more generic portrayal functions, include definitions for symbols (including parameterized symbols), include both portrayal functions and symbols in portrayal catalogues, and define a core portrayal schema, and extensions for specialized cases.

This revision for the most part expands on the concepts in ISO 19117:2005, but concepts for portrayal specifications (as a symbol instead of an operation), portrayal catalogue (also includes symbols), and rules-based portrayal (multiple rules allowed) have been changed.

AUSTRALIAN/NEW ZEALAND STANDARD

Geographic information—Portrayal

1 Scope

This International Standard specifies a conceptual schema for describing symbols, portrayal functions that map geospatial features to symbols, and the collection of symbols and portrayal functions into portrayal catalogues. This conceptual schema can be used in the design of portrayal systems. It allows feature data to be separate from portrayal data, permitting data to be portrayed in a dataset independent manner.

This International Standard is not applicable to the following:

— standard symbol collection (e.g. International Chart 1 – IHO);

— a standard for symbol graphics (e.g. scalable vector graphics [SVG]);

— portrayal services (e.g. web map service);

— capability for non-visual portrayal (e.g. aural symbology);

— dynamic rendering (e.g. on the fly contouring of tides);

— portrayal finishing rules (e.g. generalization, resolve overprinting, displacement rules);

— 3D symbolization (e.g. simulation modeling).

2 Conformance

Any portrayal catalogue, portrayal function and symbol describing the portrayal of geographic information claiming conformance with this International Standard shall pass the relevant tests of the abstract test suite presented in Annex A, and those portrayal extension requirements that are applicable to the extension or extensions being used.

Conformance classes are defined for the portrayal core, and the core plus extensions. These extensions provide additional functionality, and are not mutually exclusive of each other.

Core portrayal conformance classes
Conformance class – portrayal core (general)
Conformance class – portrayal core – symbol
Conformance class – portrayal core – portrayal function
Conformance class – portrayal core – portrayal catalogue

Portrayal function extension conformance classes
Conformance class – portrayal core plus conditional function extension
Conformance class – portrayal core plus context extension