AS/NZS ISO 19160.1:2018
ISO 19160-1:2015

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Australian/New Zealand Standard™

Addressing

Part 1: Conceptual model

AS/NZS ISO 19160.1:2018

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Australian Bureau of Statistics
Australian Hydrographic Office
Bureau of Meteorology (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.

The objective of this Standard is to define a conceptual model for address information (address model), together with the terms and definitions that describe the concepts in the model. Lifecycle, metadata, and address aliases are included in the conceptual model. The model is presented in the Unified Modelling Language (UML).

This Standard is identical with, and has been reproduced from, ISO 19160-1:2015, *Addressing —Part 1: Conceptual model*.

As this document has been reproduced from an International Standard, the following applies:

(a) In the source text 'this part of ISO 19160' should read 'this Australian/New Zealand Standard'.

(b) 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.

Contents

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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 211, *Geographic information/Geomatics*.

ISO 19160 consists of the following parts, under the general title *Addressing*:

— *Part 1: Conceptual model*

The following parts are under preparation:

— *Part 4: International postal address components and template languages*

The following parts are planned:

— *Part 2: Good practices for address assignment schemes*

— *Part 3: Quality management for address data*

— *Part 5: Address rendering for purposes other than mail*

Introduction

Addresses are one of the most common ways to unambiguously determine an object for the purposes of identification and location. Addresses vary from country to country. In many Euro-centric countries, reference to a road network in the address is common while addresses in countries, such as Japan and South Korea (though South Korea is moving away from this), comprise a hierarchy of administrative areas without reference to a thoroughfare. In the field of intelligent transport systems, an address can be considered as a simplified location system (as opposed to a coordinate reference system) where points of interest and postcodes are addressing information applicable in car navigation. Addresses are used for a wide variety of purposes: postal delivery, emergency response, customer relationship management, land administration, utility planning and maintenance, to name a few.

There are many stakeholders involved in addressing (activities involving addresses): for assigning addresses (local governments, postal operators, etc.), for using addresses in various ways (customer service providers and electronic business, local and national governments, utility service providers, election commissions, etc.), and for finding the address (citizens, delivery and emergency response service providers, etc.). Relevant stakeholders were identified during the preparatory work of the stage zero project on addressing and are now either involved or aware of the development of ISO 19160 addressing standards.

A variety of address standards and/or specifications are in use around the world. A number of these are described in the report of the preparatory work for this International Standard. These standards and specifications are well integrated into various operational processes and, in some cases, legally enforced. At the same time, some countries are rationalizing their addressing system or creating a new one. Addresses are also increasingly used to reference new geographic objects (e.g. road furniture) while they are also increasingly used in new technology such as in-vehicle navigation. The goal of this International Standard is to facilitate interoperability between existing and future address specifications.

ISO 19112 was included in the investigation of existing standards and specifications during the preparatory work for this International Standard. ISO 19112 deals with geographic identifiers, which indirectly describe position in the real world in the form of a label or code (as opposed to directly or explicitly in the form of coordinates). The review summary concluded that the requirements for addressing standards are sufficiently different to the scope of ISO 19112. If necessary, a profile of this part of ISO 19160 could be developed to map relevant parts of ISO 19112 to this International Standard.

The preparatory work for this International Standard recommended five projects with the following titles:

— *Addressing — Conceptual model*;

— *Addressing — Good practices for address assignment schemes*;

— *Addressing — Quality management for address data*;

— *Addressing — International postal address components and templates*;

— *Addressing — Address rendering for purposes other than mail*.

This part of ISO 19160 implements the first of these recommendations, the conceptual model. It aims to facilitate interoperability between address specifications, for example, in the cross-mapping of conceptual models between different address specifications.

Australian/New Zealand Standard

Addressing

Part 1: Conceptual model

1 Scope

This part of ISO 19160 defines a conceptual model for address information (address model), together with the terms and definitions that describe the concepts in the model. Lifecycle, metadata, and address aliases are included in the conceptual model. The model is presented in the Unified Modeling Language (UML).

The model provides a common representation of address information, independent of actual addressing implementations. It is not intended to replace conceptual models proposed in other specifications, but provides a means to cross-map between different conceptual models for address information and enables the conversion of address information between specifications.

The model provides a basis for developing address specifications by individual countries or communities.

2 Conformance

2.1 General

This part of ISO 19160 defines six classes of requirements and conformance. Annex A specifies how conformance with these classes shall be tested. Refer to Annex B for guidelines on developing a profile conforming to this International Standard.

2.2 Model — Core

Any address model for which core conformance is claimed shall pass all the requirements described in the abstract test suite in A.2.

2.3 Model — Lifecycle

An Address, AddressComponent or AddressableObject class in the address model for which lifecycle conformance is claimed shall pass the requirements described in the abstract test suite in A.3.

2.4 Model — Provenance

An Address or AddressComponent class in the address model for which provenance conformance is claimed shall pass the requirements described in the abstract test suite in A.4.

2.5 Model — Locale

Any Address, AddressComponent or AddressComponentValue class in the address model for which locale conformance is claimed shall pass the requirements described in the abstract test suite in A.5.

2.6 Model — Full conformance

Any address model for which full conformance is claimed shall pass all the requirements described in the abstract test suites specified for the Core, Lifecycle, Provenance and Locale conformance classes.