AS/NZS ISO 19115.2:2019
ISO 19115-2:2019

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Australian/New Zealand Standard™

Geographic information — Metadata

Part 2: Extensions for acquisition and processing

AS/NZS ISO 19115.2:2019

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ANZLIC - the Spatial Information Council
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Australian Bureau of Meteorology
Australian Bureau of Statistics
Australian Maritime Safety Authority
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This edition AS/NZS ISO 19115.2:2019.

Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-004, Geographical Information/Geomatics, to supersede AS/NZS ISO 19115.2:2011, *Geographic information—Metadata, Part 2: Extensions for imagery and gridded data.*

The objective of this Standard is to define the schema required for describing geographic information and services by means of metadata. It provides information about the identification, extent, quality, spatial and temporal aspects, content, spatial reference, portrayal, distribution, and other properties of digital geographic data and services.

This part of AS/NZS ISO 19115 is applicable to:

(a) the cataloguing of all types of resources, clearinghouse activities, and the full description of data sets and services; and

(b) geographic services, geographic data sets, data set series, and individual geographic features and feature properties.

This part of AS/NZS ISO 19115 defines:

(i) mandatory and conditional metadata sections, metadata entities, and metadata elements;

(ii) the minimum set of metadata required to serve most metadata applications (data discovery, determining data fitness for use, data access, data transfer, and use of digital data and services);

(iii) optional metadata elements to allow for a more extensive standard description of resources, if required; and

(iv) a method for extending metadata to fit specialized needs.

Though this part of AS/NZS ISO 19115 is applicable to digital data and services, its principles can be extended to many other types of resources, such as maps, charts, and textual documents as well as non-geographic data. Certain conditional metadata elements might not apply to these other forms of data.

This Standard is identical with, and has been reproduced from, ISO 19115-2:2019, *Geographic information — Metadata — Part 2: Extensions for acquisition and processing*.

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

(a) In the source text "this part of ISO 19115" should read "this Australian 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.

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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 on 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 the following URL: www.iso.org/iso/foreword.html.

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

This second edition cancels and replaces the first edition (ISO 19115-2:2009), which has been technically revised.

The following is a summary of major changes to this document during the revision process:

— The name and scope were changed to better describe the purpose of the document;

— QE_CoverageResult and QE_Useability were moved to ISO 19157;

— All extended classes now extend ISO 19115-1:2014;

— Whereas the XML Schema encoding for ISO 19115-2:2009 was provided in ISO/TS 19139-2; the link and information about the XML schema for this revision is provided in Annex C of this document;

— A specified class of MI_Instrument – MI_Sensor was defined. A list of all the parts in the ISO 19115 series, can be found on the ISO website.

Introduction

This document replaces the previous edition (ISO 19115-2:2009) *Geographic information — Metadata — Extension for imagery and gridded data,* which focused on metadata for imagery and gridded data as they are important information sources and products used within a geospatial environment by geographic information systems. During the revision process it was noted that this metadata applied to the acquisition and processing of geographic information from all sources not just imagery and gridded data. Hence, the new title *Geographic information — Metadata — Extensions for acquisition and processing*. The production of all geographic information, including imagery and gridded data, follows one or more process chains that begins with remote sensing data, scanned maps, field data collection or other sensing methods and ends with the creation of the end data products. The production process needs to be documented to maintain quality control over the end products. In addition, metadata about the geometry of the measuring process and the properties of the measuring equipment need to be retained with the raw data to support the production process.

The object of this document is to provide the additional structure needed to more extensively describe the acquisition and processing of geographic information from all sources. This structure is intended to augment ISO 19115-1. This document also provides an XML schema for implementing this document using ISO/TS 19115-3.

NOTES

Australian/New Zealand Standard

Geographic information — Metadata

Part 2: Extensions for acquisition and processing

1 Scope

This document extends ISO 19115-1:2014 by defining the schema required for an enhanced description of the acquisition and processing of geographic information, including imagery. Included are the properties of measuring systems and the numerical methods and computational procedures used to derive geographic information from the data acquired by them. This document also provides the XML encoding for acquisition and processing metadata thereby extending the XML schemas defined in ISO/TS 19115-3.

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 19103:2015, *Geographic information — Conceptual schema language*

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

ISO 19157:2013, *Geographic information — Data quality*

ISO/IEC 19501:2005, *Information technology — Open Distributed Processing — Unified Modeling Language (UML) Version 1.4.2*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 19115-1:2014 and the following apply.

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

— IEC Electropedia: available at https://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
attribute
named property of an entity

Note 1 to entry: Describes a geometrical, topological, thematic, or other characteristic of an entity.

[SOURCE: ISO/IEC 2382:2015, 2121440, modified — Note 1 to entry replaces Notes 1 and 2 to entry.]

3.2
band
range of wavelengths of electromagnetic radiation that produce a single response by a sensing device

[SOURCE: ISO/TS 19101-2:2008, 4.1]