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Australian/New Zealand Standard™

Geographic information—Profiles



AS/NZS ISO 19106:2005

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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
Australian Map Circle
Australian Urban and Regional Information Systems Association
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AS/NZS ISO 19106:2005
Geographic information—Profiles

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Australian/New Zealand Standard™

Geographic information—Profiles

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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 19106:2004, *Geographic information—Profiles*.

The objective of this Standard is to specify, and provide geographic information system, developers with, the concept of a profile of the ISO geographic information standards developed by ISO/TC 211. It provides the user with guidance for the creation of such profiles.

The terms ‘normative’ and ‘informative’ are used to define the application of the annex 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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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
19101	Geographic information—Reference model	19101	Geographic information—Reference model
19105	Geographic information—Conformance and testing	19105	Geographic information—Conformance and testing

Only international references that have been adopted as Australian or Australian/New Zealand Standards have been listed.

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INTRODUCTION

The ISO geographic information standards define a variety of models for describing, managing, and processing of geospatial data. Some of these standards are creating elements, others are introducing structures and rules. Different user communities have different requirements for the extent they want to use or implement these elements and rules. Clearly identification and documentation of specific subsets of the ISO geographic information standards in a prescribed manner in conformance with these standards profiles are needed.

Some of the ISO geographic information standards are abstract and hence will not be implemented directly. To implement them, a specification must be created, which may consist of a choice from the options defined in one or more of the standards, or instances of the rules defined in one or more of the standards or a combination thereof. Not all of the components of the specification for an implementation of the ISO geographic information standards will be derived entirely from the ISO standards. This document focuses on the definition and creation of those components that are derived entirely from the ISO geographic information standards.

An ISO geographic information profile is a subset of one or several of the ISO geographic information standards. For example, there may be a profile from ISO 19115 developed to serve a particular application area such as cadastral mapping. The profile would consist of a choice of the metadata elements available in ISO 19115. ISO 19115 would serve as a base standard for the development of the profile. An example for a base standard only introducing a methodology is given by ISO 19110. It contains methods for creating feature and attribute definitions. A profile of ISO 19110 would not contain instances of feature definitions, since there are no instances in the base standard from which to choose. A profile of ISO 19110 would contain only a subset of the rules and methods found in that standard.

The management of specifications or components of specifications that do not meet the definition of a profile is outside the scope of this International Standard. Each national standardization body or standards-setting organization, such as DGIWG¹⁾ or IHO²⁾ can develop profiles for its own purposes. These organizations may follow this International Standard in creating such profiles, but those profiles do not become ISO geographic information profiles. If feature catalogues are considered, it is easy to see that there could be any number of catalogues developed using the ISO 19110 methodology. By applying the mechanisms of this International Standard to define a profile of ISO 19110 will guarantee that the resulting feature definitions contain the same components and are catalogued in a like manner, but it will not guarantee that the definitions of features and attributes within the catalogue are not conflicting. The catalogues will be consistent, but the definitions they contain will not. Each standards-setting organization or national body that develops a feature catalogue could define 'roads' or 'rivers' or 'administrative boundaries' differently. For this reason, specifications for implementing ISO geographic information standards, which are or contain specific instances of rules or methodologies and which are not derived entirely from the ISO geographic information standards, are treated differently from profiles. This document does not focus on those implementations that are not profiles.

Geographic information systems and software developers are expected to create implementations for specific purposes that make use of a limited set of concepts from the ISO geographic information standards. These sets of concepts will be implemented in a specific technical implementation environment, for example, one of the distributed computing platforms, such as CORBA, or the World Wide Web environment. Since the standardization of specific computing environments is outside the scope of ISO/TC 211, specifications that address the implementation of ISO geographic standards in those environments will not be considered as ISO geographic information profiles of ISO/TC 211, but as independent specifications.

1) DGIWG - Digital Geographic Information Working Group - Category A liaison organization to ISO/TC 211.

2) IHO - International Hydrographic Organization - Category A liaison organization to ISO/TC 211.

This International Standard does not address the creation of specifications for implementing ISO geographic standards in specific technical implementation environments.

ISO 19109 defines the rules for the development of an application schema, including how the elements of conceptual schemas defined in other ISO geographic information standards are combined in an application schema. ISO 19109 guides the creation of application schemas, which is outside the scope of ISO 19106. An application schema by definition is not a profile but may integrate subsets of standardized schemas that are profiles.

Two classes of conformance are defined in this International Standard (see Clause 2).

NOTES

AUSTRALIAN/NEW ZEALAND STANDARD

Geographic information — Profiles

1 Scope

This International Standard is intended to define the concept of a profile of the ISO geographic information standards developed by ISO/TC 211 and to provide guidance for the creation of such profiles. Only those components of specifications that meet the definition of a profile contained herein can be established and managed through the mechanisms described in this International Standard. These profiles can be standardized internationally using the ISO standardization process. This document also provides guidance for establishing, managing, and standardizing at the national level (or in some other forum).

2 Conformance

Two classes of conformance are defined in this International Standard.

Conformance class 1 is satisfied when a profile is established as a pure subset of the ISO geographic information standards, possibly together with other ISO standards. Such a profile may be processed in accordance with the rules defined in this International Standard as an ISO geographic information standard in its own right.

Conformance class 2 allows profiles to include extensions within the context permitted in the base standard and permits the profiling of non-ISO geographic information standards as parts of profiles. When such a profile adds any information that is not covered in a base ISO geographic information standard or other ISO standard, then the profile will not be processed as an ISO geographic information standard but may be established under the authority of the standards organization, member body or liaison organization making the profile.

Any profile claiming conformance to this International Standard shall satisfy all the requirements found in the abstract test suite found in Annex A in accordance with the conformance class chosen.

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 amendments) applies.

ISO 19101:2002, *Geographic information — Reference model*

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

ISO/IEC TR 10000-1:1998, *Information technology — Framework and taxonomy of International Standardized Profiles — Part 1: General principles and documentation framework*

ISO/IEC TR 10000-3:1998, *Information technology — Framework and taxonomy of International Standardized Profiles — Part 3: Principles and Taxonomy for Open System Environment Profiles*