

AS/NZS ISO 19101:2003
ISO 19101:2002

AS/NZS ISO 19101

Australian/New Zealand Standard™

**Geographic information—
Reference model**

AS/NZS ISO 19101:2003

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 7 March 2003 and on behalf of the Council of Standards New Zealand on 18 March 2003. It was published on 12 May 2003.

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
Australasian Urban and Regional Information Systems Association
Australian Bureau of Statistics
Australian Map Circle
CSIRO Mathematical and Information Sciences
Department for Environment and Heritage, SA
Department of Conservation, NZ
Department of Defence (Australia)
Department of Lands Planning and Environment (NT)
Department of Natural Resources (Qld)
Department of Primary Industries, Water and Environment Tasmania
Electricity Supply Association of Australia
Geoscience Australia
Institution of Surveyors Australia
Intergovernmental Committee on Surveying and Mapping
Land and Property Information (NSW)
Land Information New Zealand
Land Victoria
Local Government New Zealand
Mapping Sciences Institute, Australia
Remote Sensing and Photogrammetry Association of Australasia
Telecom New Zealand
Western Australian Land Information Systems

Additional interests participating in the preparation of this Standard:

Office of Information Technology, NSW

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Australia web site at www.standards.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

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 International or Standards New Zealand at the address shown on the back cover.

Australian/New Zealand Standard™

Geographic information— Reference model

First published as AS/NZS ISO 19101:2003.

COPYRIGHT

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Jointly published by Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 5169 5

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 19101:2002, *Geographic information—Reference model*, one of the ISO 19100 series of Standards on geographical information.

The objective of this Standard is to define the framework for the methods and contents of the AS/NZS ISO 19100 series of Standards in a way that will enable the universal usage of digital geographic information.

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (b) In the source text 'this International Standard' should read 'this Australian/New Zealand Standard'.
- (c) A full point should be substituted for a comma when referring to a decimal marker.

The term 'informative' has been used in this Standard to define the application of the annex to which it applies. An 'informative' annex is only for information and guidance.

CONTENTS

| | | |
|-------|---|----|
| 1 | Scope | 1 |
| 2 | Conformance..... | 1 |
| 3 | Normative references | 1 |
| 4 | Terms and definitions | 1 |
| 5 | Symbols and abbreviated terms | 4 |
| 5.1 | Abbreviations..... | 4 |
| 5.2 | UML notation..... | 5 |
| 6 | Concepts and organization of the reference model..... | 5 |
| 6.1 | Integration of geographic information with information technology..... | 5 |
| 6.2 | Focus of standardization in the ISO 19100 series of geographic information standards | 7 |
| 6.3 | Reference model organization | 7 |
| 6.4 | Interoperability of geographic information | 8 |
| 6.4.1 | Definition of interoperability..... | 8 |
| 6.4.2 | Aspects of interoperability | 9 |
| 6.4.3 | Interoperability in the ISO 19100 series of geographic standards | 9 |
| 7 | Conceptual modelling | 10 |
| 7.1 | Content of this clause | 10 |
| 7.2 | Definition of conceptual modelling..... | 10 |
| 7.3 | Use of this clause | 11 |
| 7.4 | Specification of conceptual schema language for the ISO 19100 series of geographic information standards..... | 11 |
| 7.5 | The approach to conceptual modelling..... | 11 |
| 7.6 | Principles of conceptual modelling | 12 |
| 7.7 | Model integration..... | 13 |
| 8 | The Domain reference model | 13 |
| 8.1 | Content of this clause | 13 |
| 8.2 | Definition of Domain reference model..... | 13 |
| 8.3 | Uses of the Domain reference model | 14 |
| 8.4 | Overview of the Domain Reference model | 14 |
| 8.5 | Use of abstraction levels in the Domain reference model | 16 |
| 8.6 | Detailed description of the Domain reference model | 17 |
| 8.6.1 | Introduction..... | 17 |
| 8.6.2 | Application schema..... | 17 |
| 8.6.3 | Spatial objects and position..... | 19 |
| 8.6.4 | Reference systems | 20 |
| 8.6.5 | Quality..... | 22 |
| 8.6.6 | Metadata | 23 |
| 8.6.7 | General feature model..... | 24 |
| 9 | The Architectural reference model | 25 |
| 9.1 | Content of this clause | 25 |
| 9.2 | Definition of the Architectural reference model | 26 |
| 9.3 | Uses of the Architectural reference model | 26 |
| 9.4 | Overview of the Architectural reference model..... | 26 |
| 9.4.1 | Introduction..... | 26 |
| 9.4.2 | Services and service interfaces | 26 |
| 9.4.3 | Identifying services and service interfaces for geographic information..... | 28 |

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-