

ANZLIC Metadata Profile Guidelines

VERSION: 1.2



*ANZLIC Metadata Profile Guidelines
Version 1.2*

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1. Revision Notes

Version 1.2

Pages updated to change the ISOtoc codelists to ASDD codelists

- ☐ characterSet (40)
- ☐ topicCategory (41)
- ☐ dateType (395)
- ☐ CI_OnlineResource (396)
- ☐ function (402)
- ☐ CI_PresentationFormCode <<CodeList>>
- ☐ MD_ClassificationCode <<CodeList>>
- ☐ MD_TopicCategoryCode <<Enumeration>>
- ☐ MD_TopologyLevelCode <<CodeList>>

Version 1.1

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- ☐ *MD_Identification* (23)
- ☐ purpose (26)
- ☐ spatialResolution (38)
- ☐ extent (45)
- ☐ SV_ServiceIdentification (47)
- ☐ MD_DigitalTransferOptions (274)
- ☐ status (28)
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- ☐ edition (363)
- ☐ editionDate (364)
- ☐ Understanding UML diagrams
- ☐ Metadata Entity Set Information
- ☐ Portrayal Catalogue Information
- ☐ Application Schema Information

Pages Updated

- ☐ supplementalInformation (46)

2. Executive Summary

This Guidelines document provides practical information to better understand and implement the ANZLIC Metadata Profile. The Guidelines are aimed at data managers, creators of metadata, providers of metadata services and data users generally.

The ANZLIC Metadata Profile is a modification of the published geographic metadata standard AS/NZS ISO 19115:2005. The ANZLIC Profile defines the appropriate content of metadata for geographic information or spatial resources and how this metadata will be implemented throughout Australia and New Zealand. Widespread use of the Profile will facilitate interoperability within and between agencies and jurisdictions, both within the region and internationally, by providing a consistent basis for communicating information about resources.

The Guidelines document provides practical information to better understand and implement the ANZLIC Metadata Profile. The document includes the following sections:-

- **Introduction**, which gives a general introduction to the content and implementation of the ANZLIC Metadata Profile and to these guidelines.
- **About Metadata**, provides an introduction to metadata and metadata standards; provides an overview of the ANZLIC profile, its development and its use.
- **Implementation**, provides guidance on implementation of the ANZLIC Metadata Profile.
- **Metadata Schemas**, describes how universal modelling language (UML) diagrams are used in the ANZLIC Metadata Profile, gives an explanation of the fields used in the descriptions of the metadata elements, and lists the types of resources for which metadata can be generated.
- **Metadata Packages and Elements**, describes the elements defined in the ANZLIC profile in detail and gives practical guidance for Profile users, particularly persons creating and editing metadata records; Provides the code lists and enumerated lists that constrain particular elements.

- **Examples**, gives examples of valid ANZLIC Profile metadata records.
- **Glossary**
- **Annex A : ANZLIC Metadata Profile**, gives extracts of key sections of the Profile for ease of reference by users of the Guidelines.
- **Annex B : Mappings**, provides mappings from the ANZLIC Metadata Profile to various other standards.
- **Annex C Indexes of Elements**, by name and by number.

3. Introduction

About ANZLIC

ANZLIC — the Spatial Information Council is the peak intergovernmental organisation providing leadership in the collection, management and use of spatial information in Australia and New Zealand. ANZLIC's role is to facilitate easy and cost-effective access to the wealth of spatial data and services provided by a wide range of organisations in the public and private sectors.

ANZLIC encourages the development of consistent policies and guidelines within Australia and New Zealand to minimise barriers to spatial data and services wherever possible. ANZLIC's policies and guidelines adopt international best practice in spatial data and metadata management and are relevant to conditions found by practitioners and users of spatial information in both countries.

Background to the ANZLIC Metadata Profile

Prior to an international standard for metadata, ANZLIC developed metadata guidelines for use in Australia and New Zealand: the last version being “ANZLIC Metadata Guidelines: Core metadata elements for geographic data in Australia and New Zealand (version 2; February 2001)”. The ANZLIC Metadata Guidelines have provided Australia and New Zealand with an excellent basis for documenting geospatial datasets for a number of years.

In 2003, the International Organization for Standardization (ISO) promulgated ISO 19115 (Geographic Information - Metadata) as an ‘international standard’. The adoption of this international standard by various geospatial organisations around the world has meant that it is now essential that the Australian and New Zealand geospatial communities also re-state their metadata needs in terms of ISO 19115:2003.

The international standard has now been reviewed by Standards Australia and Standards New Zealand and adopted as AS/NZS ISO 19115:2005 Geographic information — Metadata.

The ANZLIC Metadata Profile

In order to use the metadata standard, a profile of that standard must be made that defines what will be included, excluded or added for use by a particular community. The ANZLIC Metadata Profile allows all elements of the published geographic metadata standard AS/NZS ISO 19115 with two minor changes.

The Profile defines the appropriate content of metadata for geographic (or spatial) information

resources and how this metadata will be implemented throughout Australia and New Zealand. The Profile is intended to facilitate efficient access to descriptions of information resources, and in particular geographic (or spatial) data. Widespread use of the Profile will facilitate interoperability within and between agencies and jurisdictions, both within the region and internationally, by providing a consistent basis for communicating information about resources.

It is important to note that, while primarily used to describe digital geographic data, the Profile is not restricted to only describing such resources. Other resources that can be described include maps, charts, textual documents and non-geographic resources.

The Profile defines:

- mandatory and conditional metadata sections, metadata entities, and metadata elements
- the minimum set of metadata elements for any resource in order to conform to the Profile
- the core metadata for geographic datasets
- optional metadata elements that allow for a more extensive standard description of resources
- the option to extend the Profile to cater for specialised needs.

3.1 About this Document

The ANZLIC Metadata Profile Guidelines (“Guidelines”) is a supplementary document to the ANZLIC Metadata Profile and must be read in conjunction with the Profile. The Guidelines provide practical information to better understand and implement the ANZLIC Metadata Profile.

The Guidelines provide a comprehensive guide to the make-up of the Profile and how to implement and use it. To assist custodians meet their organisational and jurisdictional obligations, these Guidelines also include information about how to upgrade existing metadata records to the ANZLIC Metadata Profile, and what is the Profile’s relationship with the Australian Government Locator Service (AGLS) and the New Zealand Government Locator Service (NZGLS).

The “ANZLIC Metadata Profile Guidelines” and the “ANZLIC Metadata Profile” replace the document “ANZLIC Metadata Guidelines: Core metadata elements for geographic data in Australia and New Zealand (version 2, February 2001)”.

Other Formats

A web version of the ANZLIC Metadata Profile Guidelines is available at <http://www.anzlic.org.au/mg>.

Audience

The Guidelines are intended for a broad audience. The intended audience includes anyone who will be involved with the resourcing, creation or maintenance of metadata.

The audience includes:-

- **Executives** responsible for business direction and strategy, and for obtaining and allocating funds and other resources needed for metadata management within an organisation.
- **Project Managers** managing scope and risk of information projects. This includes the procurement and creation of data and resources.
- **Data Managers** setting up information management processes, ensuring organisational compliance with relevant information management standards, including metadata standards.
- **Data Custodians and Metadata Creators** creating and maintaining metadata records.
- **Metadata Validators** ensuring that the metadata records are valid and comply with the ANZLIC Metadata Profile requirements.
- **Application Developers** developing applications and systems depending on or managing metadata.

Feedback and updating

It is envisaged that the Guidelines will be refined and modified as users start implementing the ANZLIC Metadata Profile. ANZLIC welcomes your feedback on the ANZLIC Metadata Profile and on this document. Please send your comments and suggestions to metadata@anzlic.org.au.

The latest versions of the documents will be available for download from the ANZLIC website at <http://www.anzlic.org.au>, and users of the Guidelines should refer to the website to ensure that they are using the latest versions.

4. About Metadata

This chapter gives background information on metadata, its uses and its benefits, outlines the current situation with regard to standards for metadata, and then gives an outline description of the ANZLIC Metadata Profile.

4.1 What is Metadata?

Metadata are structured facts that describe information, or information services. Metadata facilitates many things beyond enabling cataloguing; it also informs appropriate use of products and services. Metadata is applicable to anything, not just geographic information. For example, your business card is metadata about you.

Here is an illustration of what metadata is, using a steel can analogy.



Having no metadata is like an unlabelled sealed steel can. Without knowledge of its provenance the only way to determine content and appropriate use would be to open it, subject it to analysis, measurement, and expert judgment.

Without metadata, many questions may arise. For example:

- could the contents be benign or toxic ?
- should you attempt to open it ? (do you possess a tool to open it safely ?)
- is it food or something else ?
- if it turns out to look like food, and smell like food ... what kind of food ? (is it fit for human consumption, or is it pet food ?)
- who made this, when ?
- how to contact them ?

Receiving an information resource, or attempting to access and use a resource without access to basic metadata is analogous to dealing with the unlabelled can.

Considerable time and effort would need to be invested to confidently confirm the characteristics of the resource. Accordingly, the architects or suppliers of resources should create the authoritative metadata; they know the facts, and these need to be shared.

When users have options it is likely that resources without metadata will be relegated second class, or not considered further at all. They are more likely to be abandoned for options with reliable, maintained metadata, (though not necessarily better options). If this was a can of valuable fresh caviar ... what a waste!

Even this barren can have some basic metadata. There is a code (batch number) stamped directly onto the steel. But, **minimum metadata is minimally useful**. The most **useful metadata** is printed on the

label and accompanies the resource; as long as the label is attached to the can.



The metadata assists decisions about using the resource, in whole or in part. The metadata covers many different facets. For example it provides:

**unique
identifier**



title



abstract



purpose



**quality
information**



size



**lineage
information**



**point of
contact**



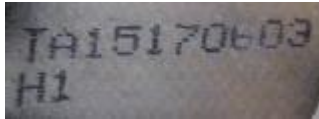
etc ...

With digital information and services the metadata can be maintained in a structured hierarchy of metadata using inheritance and/or aggregation. This optimises the maintenance of metadata by

reducing the amount of duplicated information entered into different metadata records.

Inheritance

In the steel can analogy, shown above, the label can be printed and reused on many different cans containing 'Wattie's Baked Beans'. In this way the label is similar to a hierarchy level called feature type metadata. It is really only one metadata record that is used many times on different cans.



However there is some metadata that must be related to the can itself (feature instance). This is represented by the batch number markings stamped directly on the can. The can inherits the label metadata and so only the batch number needs to change on each instance of the can.

Aggregation



This carton contains 24 cans of Wattie's Baked Beans. Its metadata is minimal. It is enough to show what is inside the box, how many and what size they are plus a unique identifier. If more information is needed about each item in the box then that information can be obtained from opening the box and looking at the metadata (labels) on the cans. This is aggregation. The carton aggregates the information from the cans without having to repeat this information in the carton's metadata.

Metadata is structured information that describes information or services. The information recorded in the metadata enables people and applications to find, manage, control, understand and preserve their data assets.

Uses of metadata

Metadata for spatial information is required for a range of purposes including:

- discovery
- assessment to determine fitness for use
- access
- use
- transfer
- management

Typically metadata for data discovery purposes represents a minimum amount of information required to convey to the enquirer the nature and content of the data resource. This falls into broad categories that answer the "what, when, who, where and how" questions about spatial data:

- What – title and description of the data set.
- When – when the data set was created and the update cycle, if any.
- Who – data set originator or creator and supplier.
- Where – the geographical extent of the data set based on lat / long coordinates, geographical names or administrative areas.
- How – how to obtain more information about the data set, how to order the data set, available formats, access constraints etc.

Among other things, metadata may be used to provide:

- detailed information about data collection methods, integration and analysis techniques applied to source data that is required to support the preparation of scientific reports;
- information about the accuracy of source datasets, processing history, and archival procedures that is required to effectively manage and utilise data within custodian organisations;
- information about projection specifications, scale, exchange format, compression and file system format that should accompany data transfers to other organisations;
- adequate descriptions of the content, quality and geographic extent of datasets that are required so potential users of existing data can assess its suitability for their own purposes;
- summary descriptions of content and quality, as well as contact information, that are required for inclusion in directory systems; and
- information about access software for datasets as well as software parameters that are needed for direct online display and query of data.

4.2 Benefits of Metadata

An organisation's information and services are valuable assets, and a substantial amount of time, money and effort is invested in these assets. By creating, maintaining and then using metadata in the various ways outlined in the previous section, metadata can play a major role in managing and putting the assets to good use. Typical examples of the benefits of metadata include the following:-

Management of data and other resources

Metadata provides an effective means for owners, custodians and managers of geographic data and other resources to have a good understanding and explicit records of the characteristics, quality, currency, comprehensiveness and utility of the geographic data and other resources that they are responsible for.

Finding resources

If users (people and applications) are unable to readily locate the information and services they seek, then the full potential of geographic data and other assets will not be fully realised. The use of standard resource descriptions (metadata), such as the ANZLIC Metadata Profile, applied to each geographic data and other asset will help people or applications find what they need amidst the vast amount of information and other resources already available. It will also help to minimise unnecessary overlap and duplication of effort in creating and maintaining data and other resources.

Fitness for purpose

Good quality and consistently structured metadata can better enable potential users to properly assess the fitness of the geographic data or other resource for the intended purpose.

Sharing resources

Creating and maintaining quality metadata that complies with recognised standards will help organisations to identify and take up opportunities to share resources with other organisations locally, nationally and internationally, and this will lead to benefits for all concerned.

4.3 Metadata Standards

Many metadata standards exist, including:

- AS/NZS ISO 19115:2005, Geographic information—Metadata
- AS/NZS ISO 15836:2004, Information and documentation—The Dublin Core metadata element set
- AS ISO/IEC 11179-2005, Information technology—Metadata registries (MDR) (Parts 1 to 4)
- ISO 23081:2006, Information and documentation—Records management processes—Metadata for records (Parts 1 to 6).

The two main metadata standards currently used in Australia and New Zealand are AS/NZS ISO 19115:2005 and AS/NZS ISO 15836:2004.

The ANZLIC Metadata Profile is based on AS/NZS ISO 19115:2005 and the corrigendum to the equivalent International Standard (ISO 19115:2003/Cor.1:2006). This appears to be the only metadata standard in use that has an XML implementation. The ISO/TS 19139:2007 Technical Specification allows an XML metadata record to be tested for compliance (See section 4.2).

The ANZLIC Metadata Profile includes all the AS/NZS ISO 19115:2005 elements and their associated obligations and conditions with the exception of fileIdentifier. This element has been made mandatory in the Profile. There are very few mandatory elements (approximately 12). Some elements are mandatory under certain conditions. The majority of elements are optional. The Guidelines must be read in conjunction with the ANZLIC Metadata Profile. For ease of reference by users of the Guidelines, some extracts from the Profile are given in Annex A.

The AGLS Metadata Element Set and the New Zealand Government Locator Standard (NZGLS) Metadata Element Set define a set of 19 descriptive elements that government departments and agencies use to "... improve the visibility, accessibility and interoperability of online information and services".

A mapping between AGLS / NZGLS and the ANZLIC Metadata Profile is provided at Annex B. Please note that the mapping is best suited when mapping from ANZLIC to AGLS / NZGLS and not vice versa. This is due to the fact that the ANZLIC elements are more detailed than the AGLS and NZGLS elements. All AGLS and NZGLS mandatory metadata elements have direct equivalent elements within the ANZLIC metadata elements.

5. Implementation

The ANZLIC Metadata Profile is based on AS/NZS ISO 19115:2005, its corrigendum (ISO 19115:2003/Cor.1:2006 Technical Corrigendum 1), and ISO 19139:2007 for implementation. The ANZLIC Metadata Profile is basically the same as these parent standards except that it changes the requirement for a fileIdentifier to be mandatory (it is optional in the national / international standard).

This important change addresses the following implementation issues:

1. to uniquely identify the metadata record. If there are many copies of this record then these copies can be identified using the fileIdentifier, and
2. to identify a child-parent relationship between metadata records using the parentIdentifier and fileIdentifier.

The sections that follow cover some specific aspects of implementation of the Profile. The chapter concludes with a checklist of these and other items involved in implementing the Profile.

5.1 Metadata Entry Tool (MET)

ANZLIC has developed a Metadata Entry Tool (MET) to facilitate the creation of ANZLIC-compliant metadata. The tool can be used to create, read, update and delete metadata records. ANZLIC will provide an open source MET.

Other METs could be used to create metadata so long as they conform to the ANZLIC Metadata Profile. In order to prove compliance to the ANZLIC Metadata Profile all tools will need to create XML that validates against the ANZLIC XML (See section 4.2).

5.2 Validation

To conform to the ANZLIC Metadata Profile, the metadata describing a resource:

1. must include all ANZLIC mandatory elements where they are applicable to the resource being described
2. should include all ANZLIC core elements when a 'dataset' resource is being described
3. all elements referring to code lists have valid values as identified in the specified codelist
4. all conditions pertaining to conditional elements are met.

In order to prove compliance with the ANZLIC Metadata Profile, it is necessary to create XML metadata document instances that are valid against other XML that is accepted as an implementation of the profile. The XML that is accepted as an implementation of the ANZLIC Metadata Profile are:

- The ISO 19139 XSDs. Validation against these of the metadata XML proves compliance to ISO 19139, which is an accepted XML implementation of ISO 19115.

- Schematron that checks the constraints in ISO 19115. The Schematron checks all but the last four constraints listed in Table A.1 of ISO 19139 and so further proves compliance to ISO 19115.
- Schematron that checks that the code lists (as identified in the codeList attribute of the XML elements) exist and that the values of the codeListValue attributes are available in the code lists. This proves compliance of the listed values with the lists themselves.
- "Schematron that checks that the fileIdentifier has appropriate content. This proves compliance with the one extra stipulation that the ANZLIC Metadata Profile adds to ISO 19115; i.e. that the fileIdentifier is mandatory.

5.3 Hierarchy

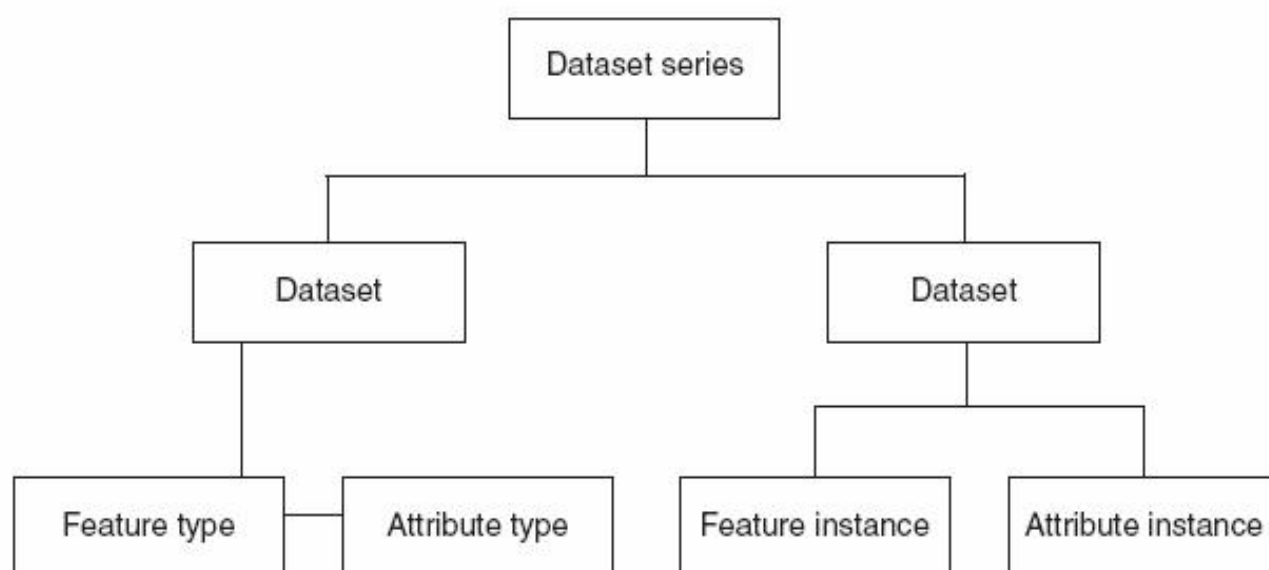


Figure 1. Hierarchy of metadata record levels

An overarching objective is to be economical with the creation and management of metadata. Redundancy should be avoided wherever possible, and metadata maintenance eased as far as practicable. Where common metadata content exists for an information resource, an implementation should logically link and automatically reuse these components as appropriate. In order to achieve such efficiencies, a concept of metadata hierarchy and inheritance has been established by the standards.

Previous metadata standards did not have a rigorous method of relating different levels of metadata to each other. Most standards concentrated on metadata for 'datasets' or 'series' as in the ANZLIC Metadata Guidelines Version 2 (February 2001). AS/NZS ISO 19115:2005 allows hierarchy levels using the hierarchyLevel and hierarchyLevelName elements. The hierarchyLevel is a code list of different parent child relationships. For example, a 'dataset' can belong to a 'dataset series', have many 'feature types', each 'feature type' can have many 'feature' instances, each 'feature' can have many 'attribute types' and each 'attribute type' can have many 'attribute' instances (See example using tin cans, labels and cartons in section 3.1). The hierarchyLevel code list can be extended to include other types of resources that are not already covered by that list.

Note: It is important that metadata authors appreciate which metadata record (level) they are creating or maintaining.

It is important not to try to fit all information into the 'dataset' metadata record. In instances where 'datasets' share the same information then the metadata should be aggregated at a higher level as a 'dataset series'. This situation is most common where the data is maintained over time or the data is broken into tiles (mapsheets). It is also likely that some of the information is related to children resources of the 'dataset' and therefore metadata records should be created for these children resources (e.g. feature metadata and attribute metadata).

The simplest child parent relationship can be identified using the `fileIdentifier` and `parentIdentifier` elements. If the value of the `parentIdentifier` (child) is the value of the `fileIdentifier` of its parent metadata record then an application can inherit the content of the entire parent metadata record into the child's metadata record. Anything that is different in the child metadata record can overwrite the content inherited from the parent. Some elements, such as title, abstract and `fileIdentifier`, should be overwritten as these should not be repeated in different metadata records.

Some elements are repeated within the same metadata record such as `CI_ResponsibleParty`. For example, the contact details for the metadata record could also be the same for the resource. The ISO 19139 XSDs have the 'uuid', 'uuidref' and 'gml:xlink' XML attributes that allow an application to control this reusable information. If the metadata contact `CI_ResponsibleParty` element is provided and a 'uuid' attribute given to this element, and the 'uuidref' attribute of the resource's `citedResponsibleParty` element contains the same value, then an application can take the XML content of the metadata contact `CI_ResponsibleParty` and put it into the resource's `citedResponsibleParty` element. In this way one record of the contact details can be managed and then used multiple times. If some of the contact details change then the change can be made on the original XML section and the other XML sections that reference the original will be automatically updated to reflect this change.

This facility can also be used between different XML records using the `gml:xlink` attribute. If the resource's `citedResponsibleParty` element of a different metadata record contains the full URL to the previously mentioned metadata contact `CI_ResponsibleParty` 'uuid' attribute then an application can read this information from a different XML metadata record and replace the content of a similar XML element using that `CI_ResponsibleParty` content.

The 'uuid', 'uuidref' and 'xlink' attributes can be used to reduce the amount of information entered for each metadata record as well as help reduce the maintenance of metadata records as the content of the reused information changes.

5.4 Conversion

Many users will be familiar with and have metadata records conforming to the previous ANZLIC Metadata Guidelines (version 2, February 2001). To assist the conversion of these records to the ANZLIC Metadata Profile, ANZLIC provides guidance for the mapping of ANZLIC Core Elements (version 2, February 2001) to the ANZLIC Metadata Profile (see Annex B).

In addition, ANZLIC provides an XSL list that can be used to map the ANZLIC Metadata Guidelines (Version 2, 2001) XML (anzmeta_1.3 XML) to the ANZLIC Metadata Profile XML. This XSL should be used in conjunction with an XSLT tool to transform old ANZLIC XML into the new format. The ANZLIC XSL is available from the ANZLIC web site at <http://www.anzlic.org.au>

5.5 Discovery and Publish

It is important that all metadata records are discoverable as long as the use constraints of those metadata records allow them to be publicly available. The Australian Spatial Data Directory (ASDD) is currently the approved ANZLIC metadata search tool. All publicly available metadata should be accessible through the ASDD. Information on how to participate in the ASDD is available from the ASDD

web site: <http://asdd.ga.gov.au/asdd/>

It is intended that the ASDD gateways will be replaced by an OGC (Open Geospatial Consortium) and ISO/TC 211 compliant application. This is likely to be the GeoNetwork Open Source application.

Any metadata that is distributed should be in ANZLIC compliant XML. Any resource that is distributed should also include this XML metadata or a reference to it via HTTP.

It is possible that multiple copies of a metadata record exist as a result of harvesting procedures. In order to identify duplicate metadata records, it is essential that each metadata record has a unique identifier. The fileIdentifier is used for this purpose and ANZLIC recommends that Universal Unique Identifiers (UUID) are used to ensure that the fileIdentifier content is universally unique.

If duplicate metadata is identified then the user should refer to the metadata contact details to determine the authoritative copy of the metadata.

5.6 Presentation

The official format for ANZLIC Metadata Profile records is the ANZLIC compliant XML. As XML is not easy for a human to read, it is necessary to provide the metadata information in a more useful presentation format. HTML is one such format and the application should use an XSL and an XSLT parser to transform the compliant XML into HTML. Another format is Simple Unstructured Text Record Syntax (SUTRS). This is useful option where a web browser is not available. Similarly, the application should use an XSL and an XSLT parser to transform the compliant XML into SUTRS.

5.7 Interoperability

To assist the geospatial community achieve maximum connectivity, ISO TC 211 have developed a set of standards called ISO 19100 series to facilitate interoperability of geographic information systems, including interoperability in distributed computing environments. These standards cover the necessary frameworks, services, data administration and interchange and the reference models.

The ANZLIC Metadata Profile provides the structure to describe digital geographic data by defining metadata elements and establishing a common set of metadata terminology, definitions and extension procedures, assisting organisations to access and share its data and being compliant to the ISO 19100 series.

Implementation of the ANZLIC Metadata Profile will promote interoperability between information communities in Australia and New Zealand, as well as the rest of the world. When implemented this will:

- Provide data producers with appropriate information to characterise their geographic data and

associated resources.

- Facilitate the organisation and management of metadata for geographic data and associated resources.
- Enable users to apply geographic data in the most efficient way by knowing its basic characteristics.
- Facilitate data discovery, retrieval and re-use. Users and applications will be better able to locate, access, evaluate, purchase and utilise geographic data.
- Enable users to assess whether geographic data is suitable for their intended purpose.
- Leverage off existing software developed by major vendors and the global spatial community.
- Enable transactions by web services using metadata about specific feature types, features, attribute types or specific attributes.

5.8 Other Profiles

The ANZLIC Metadata Profile may not meet all the metadata needs of an organisation or a community of practice. As such it may be necessary to extend the Profile. See section 2.3 of the ANZLIC Metadata Profile. Any profile that extends the ANZLIC Metadata Profile will need an XSL that transforms the new profile's XML into ANZLIC – compliant XML. The resulting XML should be validated as identified in Section 2.3 of the ANZLIC Metadata Profile.

5.9 Checklist

The following checklist can be used to help an organisation identify what is needed to create ANZLIC-compliant metadata.

- ☐ Decide who will create the metadata or 'catalogue' the resource.
- ☐ Decide whether its creation will be centralised or decentralised within the organisation.
- ☐ Ensure that appropriate metadata management systems and procedures are in place and are adequately resourced.
- ☐ Make sure involved staff are adequately resourced and properly trained, and that they have access to the necessary standards and guidelines and "help" facilities.
- ☐ Decide how the metadata is to be stored and how it is to be accessed and displayed.
- ☐ Select a metadata entry tool that best meets the organisation's needs.
- ☐ Decide on the appropriate level for the individual documentation of resources. The resources should be documented with sufficient "granularity" to yield a useful result when a user discovers the metadata record via a searching mechanism. Too coarse a granularity will result in too generalised result, too fine a granularity is likely to overwhelm the user (not to mention the metadata creator!).
- ☐ For each resource, enter the minimum set of metadata elements (elements that are either mandatory or become mandatory under certain conditions, see Annex A). Completion of this minimum requirement will provide a baseline metadata record that will conform to the Profile.
- ☐ ANZLIC has identified additional elements that will enhance the description of geographic datasets, in particular for discovery. This set of metadata, comprising the minimum metadata for geographic datasets and some additional optional elements, is referred to as core metadata for geographic datasets (see Annex A). ANZLIC strongly recommends completion of the core metadata for geographic datasets.
- ☐ In addition to the core, the Profile encompasses a large number of other elements that may be used to describe resources in more detail. Completing these elements can aid a range of uses including evaluation of the resource's fitness for purpose, and enabling applications to discover and transact directly with a resource. ANZLIC encourages completion of as many metadata elements as possible in order to better describe the resource.
- ☐ In general, the overall effort put into creating the metadata record for a resource should be consistent with the significance of the resource and with the stage of the resource's "life cycle".
- ☐ Carry out agreed quality assurance processes and ensure proof of compliance to the Profile using the validation process specified in the Profile.
- ☐ Place the metadata in the agreed store, and ensure that the metadata can be accessed and displayed.
- ☐ On an ongoing basis, ensure that the metadata is adequately maintained and kept up to date.

6. Metadata Elements

Discrete units of metadata are stored as elements. Elements are organised into entities, which may be related to one or more other entities and can be aggregated or repeated. AS/NZS ISO 19115 is very comprehensive, containing more than 400 metadata elements to provide flexibility. However, only a small number of the elements need to be completed in order to comply with the ANZLIC Metadata Profile.

6.1 Understanding UML diagrams

Unified Modelling Language (UML) diagrams are used to help conceive the relationships that exist between all the metadata elements. The ANZLIC Metadata Profile uses two types of UML diagrams: Package and Class diagrams.

The example below is a simplistic guide to reading the UML diagrams; just adequate to help navigate to the many metadata parts. The example illustrates how to navigate the linkages within a metadata set; in this example to the north, south, east and west bounding coordinate elements (a bounding box is ANZLIC's preference for defining geographic location of a resource).

Reading a Package Diagram

The Package diagram is a general purpose mechanism to provide an overview of the orderly groupings of the metadata components, and provides a graphing of their dependencies. One path is traced below to illustrate a relationship between specific packages.

The example below illustrates the pathway to navigate from the Metadata entity package to the specific details held in the Extent information Class diagram.

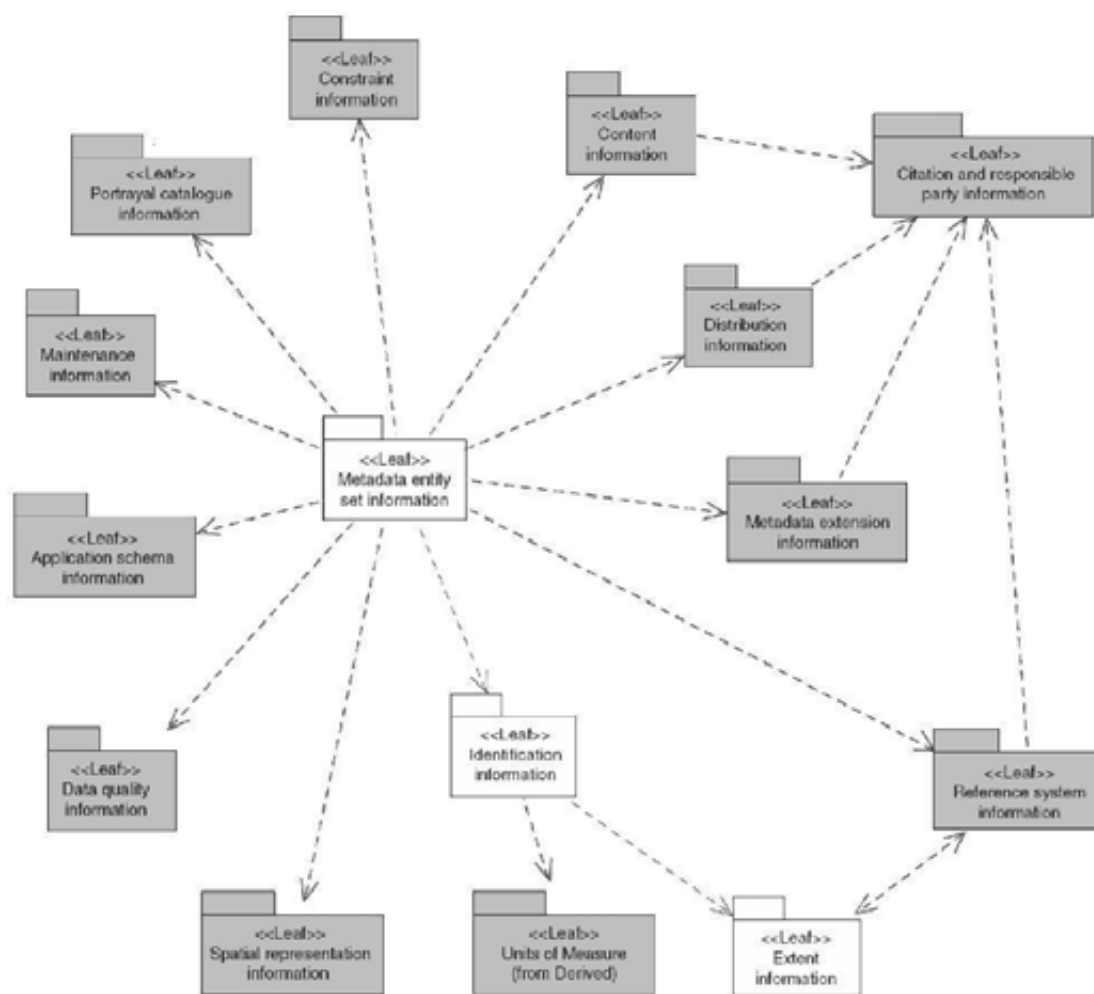


Figure 2. Package diagram

Reading a Class Diagram

The Class diagram shows the relationships within the Package. Detail about the metadata elements and their attributes are documented in Class diagrams. In the diagram below the links to the bounding coordinate detail is traced in this Class diagram:

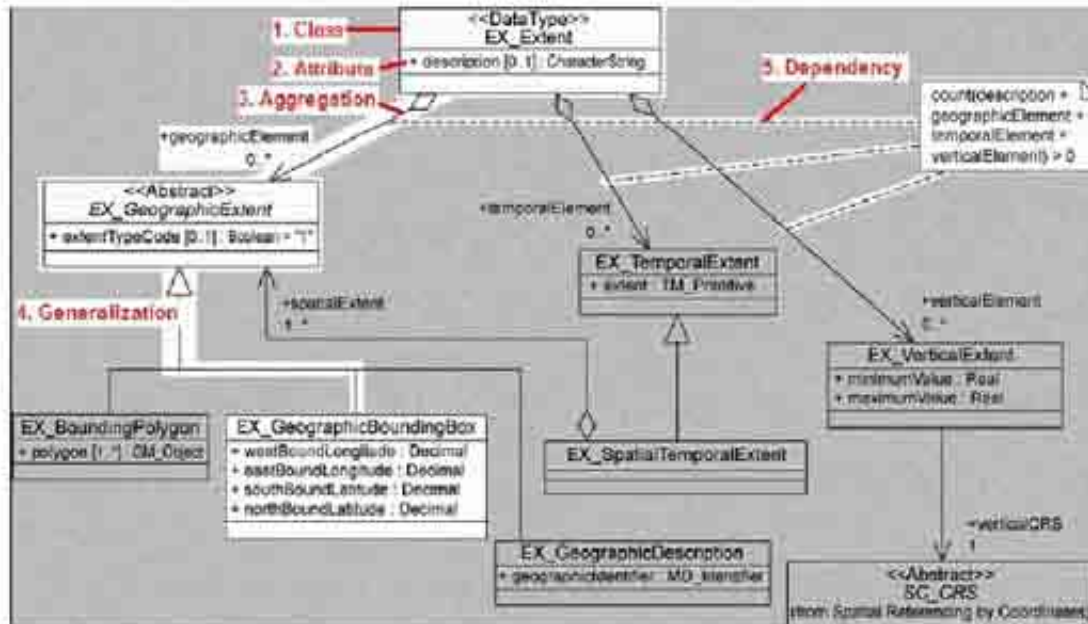


Figure 3. Extent Class diagram

Notes from the above Class diagram:

1. **Class** : **EX_Extent** is a class. It contains a set of objects that share the same attributes, operations, methods, relationships and semantics. **EX_Extent** class is of type <<Data Type>>. Other class types are:

a. <<Abstract>> A class that can not be implemented (instantiated) but forms the basis of a generalization. In the above diagram, **EX_GeographicExtent** could be implemented as **EX_BoundingPolygon**, **EX_GeographicBoundingBox** and/or **EX_GeographicDescription** class. In our example, the bounding coordinates will be represented by the **EX_GeographicBoundingBox** class.

b. <<Union>> is a type consisting of one and only one of several alternatives (listed as member attributes).

c. <<Enumeration>> A data type whose instances form a list of named literal values. This list cannot be changed.

d. <<CodeList>> is a flexible list of named values. This list can be extended.

e. <<MetaClass>> A class whose instances are other classes.

2. **Attribute** : **description** is an attribute or, when implemented, an XML element.

a. The **[0..1]** indicates that zero or one objects may exist. Other options are: **[1]** must have one object, **[1..*]** one or more objects, **[0..*]** zero or more objects, **[n]** a certain number of objects, or **[n1..n2]** a range of objects. The default is exactly one object.

b. **CharacterString** indicates the type of the **description** attribute. These are further defined in Annex B

of ISO 19115.

3. **Aggregation** : this rhombus indicates that the EX_Extent datatype is an aggregate of the metadata elements that describe the spatial and temporal extent of the resource including information about the geographic extent (EX_GeographicExtent). In our example EX_Extent has a geographicElement that is of type EX_GeographicExtent. The UML diagram shows that EX_GeographicExtent provides information about the geographicElement which is a child of EX_Extent.

4. **Generalization** : this arrow indicates that EX_GeographicBoundingBox is a EX_GeographicExtent. It will inherit all the attributes of the parent class. That is, the extentTypeCode attribute.

5. **Dependency** : - - - the dotted lines indicate that there is a dependency between these aggregations. In our example the comment box shows what that dependency or association is. That is, there must be at least one of description, geographicElement, temporalElement or verticalElement if the EX_Extent class is used in a metadata record. These constraints are usually expressed as mathematical expressions to reduce ambiguity.

Traversing the UML, XML and XPATH

UML diagrams are implemented as XML. Validation of the XML metadata records can prove compliance to AS/NZS ISO 19115:2005. The XPATH is the child/parent relation between the XML elements and can be determined mostly by following the path through the UML diagram.

In our example, the XPATH through the package diagram is:

```
//gmd:MD_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd:extent
```

The XPATH through the EX_Extent class to the west bounding co-ordinate is:

```
gmd:EX_Extent/gmd:geographicElement/gmd:EX_GeographicBoundingBox/gmd:westBoundLongitude
/gco:Decimal
```

When these are combined the full pathname is:

```
//gmd:MD_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd:extent/gmd:EX_Extent
/gmd:geographicElement/gmd:EX_GeographicBoundingBox/gmd:westBoundLongitude/gco:Decimal
```

6.2 Explanation of Fields Used in Element Descriptions

The following sections contain individual metadata element descriptions for each metadata element within the ANZLIC Metadata Profile. For definitions of ANZLIC category "ISO" elements, refer to Appendix A (Annotated excerpts from AS/NZS ISO 19115; B.2 Metadata Package Data Dictionaries and B.3 Data Type Information). These element descriptions are organised in the sequence of their ISO 19115 Element Number. This list identifies the standard headings used in each element description. Information recorded against Name (Line Number), Short Name, Definition, Obligation/Condition, Maximum Occurrence, Data Type and Domain have been derived from the ANZLIC Metadata Profile, ISO 19115.2003/Cor. 1:2006 and AS/NZS ISO 19115:2005. Note: Meaning & Purpose, Guidance and Examples are provided for only some elements.

Name (Line Number) [UML]

Name: The AS/NZS ISO 19115 name for the element.

Line Number: The element number. Note: Numbers may not be consecutive, as some numbers are no longer used and have been intentionally left blank.

UML: A link to the relevant UML class diagram provides context for each metadata element.

Short Name

The short name for the element. This name is unique within AS/NZS ISO 19115.

Definition

A definition for the metadata element.

Obligation/Condition

For the purposes of conformance testing, elements in the ANZLIC Metadata Profile have been assigned one of the following obligations/conditions:

Mandatory (i.e. compulsory), Conditional (i.e. must be included if specified conditions prevail) or Optional (i.e. to be included at the discretion of the person responsible for the metadata).

Maximum Occurrence

The maximum number of occurrences of an element.

Data Type

The type of data for the element.

Domain

For an entity, the domain indicates the line numbers covered by the entity.

Meaning & Purpose

A short explanation of what the element is and why it is required.

Guidance

Rules for data entry. Element refinements help to qualify a metadata element to control the format (syntax) of the value used to describe the metadata element. Where it is appropriate, a default value is defined.

Examples

Example values for the described element. There are three components in each example: a plain language explanation, a value and XML.

7.1 Metadata Entity Set Information

Meaning & Purpose Exists to support its children elements and does not contain values in its own right.

Guidance This will be the root element if it is a standalone metadata record. If it is the root element then the XML implementation will require certain attributes (see example). This element could be a sub-element of DS_Aggregate.

The metadata content creator is not required to record any information against this element.

Example

Explanation	This first line in the XML is necessary and must be the very first line in the XML document. The 'version' attribute defines the version of XML being used and the encoding attribute defines the character set that can be used in the XML.
Value	The default value for encoding is UTF-8.
XML	<pre><?xml version="1.0" encoding="UTF-8"?> <gmd:MD_Metadata xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:gco="http://www.isotc211.org/2005/gco" xmlns:gmd="http://www.isotc211.org/2005/gmd" xmlns:gts="http://www.isotc211.org/2005/gts" xmlns:gsr="http://www.isotc211.org/2005/gsr" xmlns:gss="http://www.isotc211.org/2005/gss" xmlns:gmw="http://www.isotc211.org/2005/gmw" xmlns:gml="http://www.opengis.net/gml" xmlns:xlink="http://www.w3.org/1999/xlink" xsi:schemaLocation=" http://www.isotc211.org/2005/gmd http://www.isotc211.org/2005/gmd/gmd.xsd http://www.opengis.net/gml http://www.opengis.net/gml/gml.xsd http://www.w3.org/1999/xlink http://www.w3.org/1999/xlink/xlinks.xsd"></pre>

Metadata File Identifier

Name (Number)	fileIdentifier (2) [UML]
Short Name	mdFileID
Definition	unique identifier for this metadata file
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

The metadata file identifier permanently and uniquely identifies a metadata record. The fileIdentifier for a metadata record will never change, irrespective of where that metadata record is stored.

fileIdentifier must be completed to support linkage between parent and child metadata records, supporting the hierarchical relationship between metadata records.

fileIdentifier is also useful to identify duplicate copies of metadata records.

ANZLIC has declared *fileIdentifier* as a mandatory metadata element. This is a restriction on the AS/NZS ISO 19115 standard that has declared the obligation of *fileIdentifier* to be optional.

This element is used when creating a dataset series, see [Parent Metadata Identifier](#)

Guidance

fileIdentifier should not contain special meta characters such as space, asterix (*), back slash (\), question mark (?), apostrophe ('), greater than (>), less than (<) and other characters that may cause problems when manipulating files at the disk level using file names based on the *fileIdentifier*. This will not be an issue if a Universally Unique Identifier (UUID) is used as the *fileIdentifier*.

ANZLIC strongly recommends the use of a UUID. UUIDs enable information from diverse sources to be combined and used together without problems arising from naming conflicts, and provides reasonable certainty of uniqueness.

Many software vendors have adopted UUIDs as the *fileIdentifier*. Use of UUIDs are also strongly recommended by the Open Geospatial Consortium Inc. (OpenGIS® Catalogue Services Specification 2.0 - ISO19115/ISO19119 Application Profile for CSW 2.0).

Organisations may define file naming conventions, but must ensure that it is unique, otherwise it will not be ANZLIC compliant.

Example

Explanation	UUID (in canonical form)
Value	550E8400-E29B-11D4-A716-446655440000
XML	<pre> <gmd:MD_Metadata ...> ... <gmd:fileIdentifier> <gco:CharacterString> 550E8400-E29B-11D4-A716-446655440000</gco:CharacterString> </gmd:fileIdentifier> ... </gmd:MD_Metadata> </pre>

Metadata Language

Name (Number)	language (3) [UML]
Short Name	mdLang
Definition	language used for documenting metadata
Obligation/Condition	Conditional: mandatory if not defined by encoding
Maximum Occurrence	1
Data Type	CharacterString
Domain	ISO 639-2 , other parts may be used

Meaning & Purpose	<p>The metadata language is the written language used for completing the metadata record. This element does not describe the language used within the resource itself (see Data Language (39)).</p> <p>While this element is not intended to be a primary search point, it may a search to be restricted to resources where the metadata has been created in a specific language. For example, "find all metadata for Otago data resources where the metadata is published in Maori".</p>
Guidance	<p>It is recommended that the language values be chosen from a standard set given in ISO 639-2 (3 letter code); however, other parts of ISO 639 may be used (e.g. for multi-languages). A full list of language codes is available at http://www.loc.gov/standards/iso639-2/php/code_list.php.</p> <p>Suggested default value is 'eng'</p>

Example 1

Explanation	where language is defined by encoding
Value	eng (English)
XML	<pre> <gmd:MD_Metadata ... xmlns:language="eng" ...> ... </gmd:MD_Metadata> </pre>

Example 2

Explanation	where language is not defined by encoding
Value	eng (English)
XML	<pre> <gmd:MD_Metadata...> ... <gmd:language> <gco:CharacterString>eng</gco:CharacterString> </gmd:language> ... </gmd:MD_Metadata> </pre>

Example 3

Explanation	where language is not defined by encoding
Value	mao (Maori)
XML	<pre> <gmd:MD_Metadata...> ... <gmd:language> <gco:CharacterString>mao</gco:CharacterString> </gmd:language> ... </gmd:MD_Metadata> </pre>

Metadata Character Set

Name (Number)	characterSet (4) [UML]
Short Name	mdChar
Definition	full name of the character coding standard used for the metadata set
Obligation/ Condition	Conditional: mandatory if ISO/IEC 10646-1 not used and not defined by encoding
Maximum Occurrence	1
Data Type	Class
Domain	MD_CharacterSetCode <<CodeList>>

Meaning & Purpose The metadata character set is the code for the character set used in the metadata record. This element does not describe the character set used within the resource itself (see [Data Character Set \(40\)](#))

Guidance characterSet values are chosen from a standard code list as shown in [MD_CharacterSetCode](#).

ANZLIC suggests a default value of 'utf8' (8-bit variable size UCS Transfer Format, based on ISO/IEC 10646) as it is one of the more commonly used character sets.

It is not necessary to complete this element if the encoding attribute is provided in the XML declaration.

Example 1

Explanation	defined by encoding
Value	Character set is set to utf8
XML	<pre><?xml encoding="UTF-8" ?></pre> <p>Note: in this example the XML declaration has an encoding value of 'utf8' and therefore there is no need for the characterSet element to exist.</p>

Example 2

Explanation	not defined by encoding
Value	Character set is set to utf8
XML	<pre> <gmd:MD_Metadata...> ... <gmd:characterSet> <gmd:MD_CharacterSetCode codeList=" http://asdd.ga.gov.au/asdd/profileinfo/gmxCodelists.xml#MD_CharacterSetCode ">utf8</gmd:MD_CharacterSetCode> </gmd:characterSet> ... </gmd:MD_Metadata> </pre>

Metadata Parent Identifier

Name (Number)	parentIdentifier (5) UML
Short Name	mdParentID
Definition	file identifier of the metadata to which this metadata is a subset (child)
Obligation/Condition	Conditional: mandatory if there is an upper hierarchy level
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose The metadata parent identifier indicates that this metadata record has a parent metadata record and that this metadata references and inherits those higher level metadata descriptions. For example, in some cases 'dataset' metadata may be part of a 'series'. As such it is appropriate for the 'dataset' (child) metadata to have a parentIdentifier element which is the value of the 'series' (parent) fileIdentifier.

Guidance If this metadata record forms part of a series, then the parentIdentifier must be completed. The content of the child's parentIdentifier is the same as the content of the parent's fileIdentifier.

Example

Explanation	Example (XML)
Value	Metadata file parent identifier is 550E8400-E29B-11D4-A716-446655441111
XML	<pre> <gmd:MD_Metadata ...> ... <gmd:parentIdentifier> <gco:CharacterString>550E8400-E29B-11D4-A716- 446655441111</gco:CharacterString> </gmd:parentIdentifier> ... </gmd:MD_Metadata> </pre>

Metadata Hierarchy Level

Name (Number)	hierarchyLevel (6) [UML]
Short Name	mdHrLv
Definition	scope to which the metadata applies
Obligation/Condition	Conditional: mandatory if hierarchyLevel is not equal to 'dataset'.
Maximum Occurrence	No maximum
Data Type	Class
Domain	MD_ScopeCode <<CodeList>>

Meaning & Purpose	The metadata hierarchy level identifies the scope of the resource described by this metadata record. hierarchyLevel values are chosen from a controlled list MD_ScopeCode .
Guidance	<p>If this element does not exist then it is assumed that the hierarchyLevel equals 'dataset'.</p> <p>Although this element is not mandatory where hierarchyLevel equals 'dataset', ANZLIC recommends that this element always be completed.</p> <p>Please note that the MD_ScopeCode code list is extensible. If this code list is extended then the extended code list must be referenced.</p> <p>Default value is 'dataset'</p>

Example 1

Explanation	The following XML example shows the use of hierarchyLevel in context.
Value	dataset
XML	<pre> <gmd:MD_Metadata...> ... <gmd:hierarchyLevel> http://asdd.ga.gov.au/asdd/profileinfo/gmxCodelists.xml#MD_ScopeCode "codeListValue="dataset">dataset/gmd:MD_ScopeCode> </gmd:hierarchyLevel> ... </gmd:MD_Metadata> </pre>

Example 2

Explanation	The following XML example shows the use of hierarchyLevel in context
Value	attributeType
XML	<pre> <gmd:MD_Metadata...> ... <gmd:hierarchyLevel> <gmd:MD_ScopeCode>codeList="http://asdd.ga.gov.au/asdd/profileinfo/gmxCodelists.xml#MD_ScopeCode" codeListValue="attributeType ">attributeType</gmd:MD_ScopeCode> </gmd:hierarchyLevel> ... </gmd:MD_Metadata> </pre>

Example 3

Explanation	The following XML example shows the use of hierarchyLevel in context
Value	nonGeographicDataset
XML	<pre> <gmd:MD_Metadata...> ... <gmd:hierarchyLevel> <gmd:MD_ScopeCode>codeList="http://asdd.ga.gov.au/asdd/profileinfo/gmxCodelists.xml#MD_ScopeCode" codeListValue="nonGeographicDataset ">nonGeographicDataset</gmd:MD_ScopeCode> </gmd:hierarchyLevel> ... </gmd:MD_Metadata> </pre>

Metadata Hierarchy Level Name

Name (Number)	hierarchyLevelName (7) [UML]
Short Name	mdHrLvName
Definition	name of the hierarchy levels for which the metadata is provided
Obligation/Condition	Conditional: mandatory if the hierarchyLevel is not equal to 'dataset'.
Maximum Occurrence	No maximum
Data Type	CharacterString
Domain	Free text

Meaning & Purpose The metadata hierarchy level name should identify the scope of the resource described by this metadata record, and allow for further clarification of that scope.

hierarchyLevelName must be used in conjunction with [hierarchyLevel](#) to clearly identify the type of resource to which this metadata applies.

Guidance Should begin with the value of [hierarchyLevel](#) (e.g. 'collectionHardware') followed by the scope of the resource. This is necessary because both multiple [hierarchyLevel](#) and hierarchyLevelName may exist. This reiteration of the [hierarchyLevel](#) clearly identifies which instance of these two elements relate to each other.

Example 1

Explanation	Example (XML)
Value	dataset
XML	<pre><gmd:MD_Metadata...> ... <gmd:hierarchyLevelName> <gco:CharacterString>dataset</gco:CharacterString> </gmd:hierarchyLevelName> ... </gmd:MD_Metadata></pre>

Example 2

Explanation	Example (XML)
Value	dataset of locality polygons
XML	<pre><gmd:MD_Metadata ...> ... <gmd:hierarchyLevelName> <gco:CharacterString>dataset of locality polygons </gco:CharacterString> </gmd:hierarchyLevelName> ... </gmd:MD_Metadata></pre>

Example 3

Explanation	Example (XML)
Value	service – web map service
XML	<pre> <gmd:MD_Metadata ...> ... <gmd:hierarchyLevelName> <gco:CharacterString>service - web map service </gco:CharacterString> </gmd:hierarchyLevelName> ... </gmd:MD_Metadata> </pre>

Metadata Point of Contact

Name (Number)	contact (8) [UML]
Short Name	mdContact
Definition	party responsible for the metadata information
Obligation/ Condition	Mandatory
Maximum Occurrence	No maximum
Data Type	Class
Domain	CI_ResponsibleParty<<Data Type>>

Meaning & Purpose The metadata contact contains details about the individual, organisation and/or position associated with the metadata information.

This element exists to supports the class [CI_ResponsibleParty](#).

Guidance This contains no specific value in its own right.

The metadata content creator is not required to record any information against this element.

Example

Explanation	Example (XML)
Value	contact
XML	<pre> <gmd:MD_Metadata...> ... <gmd:contact> <gmd:CI_ResponsibleParty> ... </gmd:CI_ResponsibleParty> </gmd:contact> ... </gmd:MD_Metadata> </pre>

Metadata Date Stamp

Name (Number)	dateStamp (9) [UML]
Short Name	mdDateSt
Definition	date that the metadata was created
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	Date

Meaning & Purpose The metadata date stamp provides the date that the metadata record was created, and not the date that the resource was created. It is not the date the metadata was last updated.

Guidance The dateStamp value will never change for a particular metadata record. See section ['Date and Date/Time'](#) for ISO 8601 valid formats.

Example 1

Explanation	The following XML example shows dateStamp using dashes between the year, month and day (as shown below for 22 March 2006)
Value	2006-03-22
XML	<pre><gmd:MD_Metadata...> ... <gmd:dateStamp> <gco>Date>2006-03-22</gco>Date> </gmd:dateStamp> ... </gmd:MD_Metadata></pre>

Example 2

Explanation	The following XML example shows dateStamp format without dashes (as shown below for 22 March 2006)
Value	20060322
XML	<pre><gmd:MD_Metadata...> ... <gmd:dateStamp> <gco>Date>20060322</gco>Date> </gmd:dateStamp> ... </gmd:MD_Metadata></pre>

Example 3

Explanation	The following XML example shows dateStamp format for March 2006
Value	2006-03
XML	<pre><gmd:MD_Metadata...> ... <gmd:dateStamp> <gco>Date>2006-03</gco>Date> </gmd:dateStamp> ... </gmd:MD_Metadata></pre>

Example 4

Explanation	The following XML example shows dateStamp format for Year only - 2006
Value	2006
XML	<pre> <gmd:MD_Metadata...> ... <gmd:dateStamp> <gco:Date>2006</gco:Date> </gmd:dateStamp> ... </gmd:MD_Metadata> </pre>

Example 5

Explanation	The following XML example shows dateStamp format for 21st century
Value	20
XML	<pre> <gmd:MD_Metadata...> ... <gmd:dateStamp> <gco:Date>20</gco:Date> </gmd:dateStamp> ... </gmd:MD_Metadata> </pre>

Metadata Standard Name

Name (Number)	metadataStandardName (10) [UML]
Short Name	mdStanName
Definition	name of the metadata standard (including profile name) used
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

The metadata standard name allows the user to identify which metadata profile has been used to compile this particular metadata file. This element will not be used as a search criteria.

All metadata complying with this Metadata Profile should use the default value unmodified.

Guidance Default value: ANZLIC Metadata Profile

Example ANZLIC Metadata

Explanation	Example (XML)
Value	ANZLIC Metadata Profile
XML	<pre><gmd:MD_Metadata...> ... <gmd:metadataStandardName> <gco:CharacterString>ANZLIC Metadata Profile </gco:CharacterString> </gmd:metadataStandardName> ... </gmd:MD_Metadata></pre>

Metadata Standard Version

Name (Number)	metadataStandardVersion (11) [UML]
Short Name	mdStanVer
Definition	version of the metadata standard (version of the profile) used
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose The metadata standard version allows the user to ascertain which version of the metadata standard this metadata record conforms.

The version value must be used with the Standard Name element and these two values should define the allowable content of the metadata.

Guidance Default value: "1.1" (for this initial version of the Metadata Profile)

Example

Explanation	Example (XML)
Value	1.1 (The metadata standard version is 1.1)
XML	<pre><gmd:MD_Metadata...> ... <gmd:metadataStandardVersion> <gco:CharacterString>1.1</gco:CharacterString> </gmd:metadataStandardVersion> ... </gmd:MD_Metadata></pre>

Dataset URI

Name (Number)	dataSetURI (11.1) [UML]
Short Name	dataSetURI
Definition	Uniform Resource Identifier (URI) of the dataset to which the metadata applies
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose This element allows the user to directly access datasets that are available online, either as public or restricted access.

Uniform Resource Identifiers (URIs) are short strings that identify the resource on the web or network: documents, images, downloadable files, services, electronic mailboxes, and other resources. They make resources available under a variety of naming schemes and access methods such as HTTP, FTP, and Internet mail addressable in the same simple way.

Care should be taken to ensure this identifier is correctly recorded. Note: this is different to making a dataset available through a distributor found under the `..gmd:distributionInfo/..` element.

Guidance Free text

Example 1

Explanation	This XML example shows dataSetURI as a ftp site where a text document is available
Value	ftp://ftp.is.co.za/rfc/rfc1808.txt
XML	<pre> <gmd:MD_Metadata ...> ... <gmd:dataSetURI> <gco:CharacterString>ftp://ftp.is.co.za/rfc/rfc1808.txt </gco:CharacterString> </gmd:dataSetURI> ... </gmd:MD_Metadata> </pre>
Other examples of dataSetURI forms	http://www.ietf.org/rfc/rfc2396.txt
	ldap://[2001:db8::7]/c=GB?objectClass?one

Example 2

Explanation	This XML example shows an internal directory where data is managed but not available to the public. The 'gco:nilReason=?withheld?' XML attribute indicates that the XML element "gco:CharacterString" should be removed prior to publishing externally.
Value	\\act001cl06fs01\abare-brs_data\data\warehouse\ rfc1808.txt
XML	<pre> <gmd:MD_Metadata ...> ... <gmd:dataSetURI gco:nilReason=?withheld?> <gco:CharacterString>\\act001cl06fs01\abare-brs_data\ a\data\warehouse\ rfc1808.txt </gco:CharacterString> </gmd:dataSetURI> ... </gmd:MD_Metadata> </pre>

Locale

Name (Number)	locale (11.2) UML
Short Name	loc
Definition	provides information about an alternatively used localised character string for a linguistic extension
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	PT_Locale (from ISO 19139)

Meaning & Purpose Each metadata statement that is defined in an alternative language, is defined through the locale property of [MD_Metadata](#).

Guidance Used to record the alternative languages that a metadata statement is found in.

Example

Explanation	In the following example, some of these metadata have been translated into French.
Value	
XML	<pre> <MD_Metadata> . . . <locale> <PT_Locale id="locale-fr"> <languageCode> <LanguageCode codeList="resources/Codelist/gmxcodelists.xml#LanguageCode" codeListValue="fra"> French </LanguageCode> </languageCode> <characterEncoding> <MD_CharacterSetCode codeList="resources/Codelist/gmxcodelists.xml#MD_CharacterSetCode" codeListValue="utf8">UTF 8</MD_CharacterSetCode> </characterEncoding> </PT_Locale> </locale> . . . </MD_Metadata> </pre>

Spatial Representation Information

Name (Number)	Role name: spatialRepresentationInfo (12) [UML]
Short Name	spatRepInfo
Definition	digital representation of spatial information in the dataset
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_SpatialRepresentation <<Abstract>>

Meaning & Purpose spatialRepresentationInfo is a container, like a heading, to identify information concerning how a resource is represented spatially. This may include information related to the data type, vector or raster, how the dataset has been spatial related (eg: georeferenced). How the spatial objects relate to each other and the number of objects (eg: points, lines, polygons, rows and columns)..

Guidance This element has no specific value but provides the structure for an instance of the class [MD_SpatialRepresentation](#).

No value is required because the XML element "spatialRepresentationInfo" is an entity to store further information.

It contains either [MD_GridSpatialRepresentation](#) or [MD_VectorSpatialRepresentation](#) related elements.

Metadata for Spatial data representation are derived from ISO 19107.

Example

Explanation	The following demonstrates the use of spatial representation with MD_VectorSpatialRepresentation elements.
Value	
XML	<pre> <gmd:MD_Metadata ...> ... <gmd:spatialRepresentationInfo> ... </gmd:spatialRepresentationInfo> ... </gmd:MD_Metadata> </pre>

Reference System Information

Name (Number)	<i>Role name:</i> referenceSystemInfo (13) UML
Short Name	refSysInfo
Definition	description of the spatial and temporal reference systems used in the dataset
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_ReferenceSystem

Meaning & Purpose The reference system information used to align the dataset in time and space. This element exists to support class [MD_ReferenceSystem](#) (186).

Guidance The metadata element content creator is not required to record any information against this element.
ANZLIC recommends the use of EPSG codes.

Example

Explanation	the reference system information in context
Value	
XML	<pre> <gmd:MD_Metadata ...> ... <gmd:referenceSystemInfo> <gmd:MD_ReferenceSystem> <gmd:referenceSystemIdentifier> <gmd:RS_Identifier> ... </gmd:RS_Identifier> </gmd:referenceSystemIdentifier> </gmd:MD_ReferenceSystem> </gmd:referenceSystemInfo> ... </gmd:MD_Metadata> </pre>

Metadata Extension Information

Name (Number)	Role name: metadataExtensionInfo (14) [UML]
Short Name	mdExtInfo
Definition	information describing metadata extensions
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_MetadataExtensionInformation

Meaning & Purpose

Guidance

Example

Identification Information

Name (Number)	<i>Role name:</i> identificationInfo (15) [UML]
Short Name	dataIdInfo
Definition	basic information about the resource(s) to which the metadata applies
Obligation/ Condition	Mandatory
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_Identification <<Abstract>>

Meaning & Purpose The data identification contains basic information about the resource, including citation, abstract, keywords, spatial resolution, topic category and extent. For services, there are also service types and the operations it contains.

This element exists to support the classes [MD_DataIdentification](#) and [SV_ServiceIdentification](#).

Guidance This contains no specific value in its own right.

The metadata content creator is not required to record any information against this element.

Example 1

Explanation	Example (XML)
Value	
XML	<pre> <gmd:MD_Metadata...> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata> </pre>

Example 2

Explanation	Example (XML)
Value	
XML	<pre> <gmd:MD_Metadata...> ... <gmd:identificationInfo> <gmd:SV_ServiceIdentification> ... </gmd:SV_ServiceIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata> </pre>

Content Information

Name (Number)	Role name: contentInfo (16) [UML]
Short Name	contInfo
Definition	provides information about the feature catalogue and describes the coverage and image data characteristics
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_ContentInformation <<Abstract>>

Meaning & Purpose

Guidance

Example

Distribution Information

Name (Number)	Role name: distributionInfo (17) [UML]
Short Name	distInfo
Definition	provides information about the distributor of and options for obtaining the resource (s)
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Association
Domain	MD Distribution

Meaning & Purpose The distribution information provides the link to information about how to obtain the resource.

This element exists to support class [MD Distribution](#) (270).

Guidance This contains no specific value in its own right.

The metadata content creator is not required to record any information against this element.

Note: only one distribution information can exist for each metadata record

Example

Explanation	the distribution class in context
Value	not applicable
XML	<pre> <gmd:MD_Metadata ...> ... <gmd:distributionInfo> <gmd:MD_Distribution> ... </gmd:MD_Distribution> </gmd:distributionInfo> ... </gmd:MD_Metadata> </pre>

Data Quality Information

Name (Number)	<i>Role name:</i> dataQualityInfo (18) [UML]
Short Name	dqInfo
Definition	provides overall assessment of quality of a resource(s)
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	DQ_DataQuality

Meaning & Purpose

Guidance

Example

Portrayal Catalogue Information

Name (Number)	<i>Role name:</i> portrayalCatalogueInfo (19) [UML]
Short Name	porCatInfo
Definition	provides information about the catalogue of rules defined for the portrayal of a resource(s)
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_PortrayalCatalogueReference

Meaning & Purpose

Guidance

Example

Metadata Constraints

Name (Number)	<i>Role name:</i> metadataConstraints (20) [UML]
Short Name	mdConst
Definition	provides restrictions on the access and use of metadata
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_Constraints

Meaning & Purpose

Guidance

Example

Application Schema Information

Name (Number)	<i>Role name:</i> applicationSchemaInfo (21) [UML]
Short Name	appSchInfo
Definition	provides information about the conceptual schema of a dataset
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_ApplicationSchemaInformation

Meaning & Purpose

Guidance

Example

Metadata Maintenance

Name (Number)	<i>Role name:</i> metadataMaintenance (22) [UML]
Short Name	mdMaint
Definition	provides information about the frequency of metadata updates, and the scope of those updates
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Association
Domain	MD_MaintenanceInformation

Meaning & Purpose

Guidance

Example

Figure 5 . Identification information

(Source : ISO 19115:2003/Cor 1:2006, Figure A.2 Identification information)

7.2.1 General

Identification

Name (Number)	<i>MD_Identification</i> (23) [UML]
Short Name	Ident
Definition	basic information required to uniquely identify a resource or resources
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Metadata) << Abstract >>
Domain	Lines 24–35.1

Meaning & Purpose Identification information contains information to uniquely identify the resource including information about the citation for the resource, an abstract, the purpose, credit, the status and points of contact. The content of MD_Identification entity is mandatory; although MD_Identification, being an abstract type, will never be instantiated.

The MD_Identification entity may be specified (subclassed) as [MD_DataIdentification](#) when used to identify data and as [SV_ServiceIdentification](#) when used to identify a service. [SV_ServiceIdentification](#) provides a high level description of a service, for further information see [ISO 19119](#).

Guidance Must not be instantiated.

The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows the use of MD_Identification in context
Value	
XML	<pre> <gmd:MD_Metadata...> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata...> </pre>

Identification Citation

Name (Number)	citation (24) [UML]
Short Name	idCitation
Definition	citation data for the resource(s)
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	CI_Citation <<DataType>>

Meaning & Purpose	<p>The identification citation contains basic information about the resource citation, including title, date and cited responsible party.</p> <p>This element exists to support the class CI_Citation.</p>
Guidance	<p>This element contains no specific value in its own right.</p> <p>The metadata content creator is not required to record any information against this element.</p> <p>This element provides the structure for an instance of the data type CI_Citation.</p> <p>This element contains the mandatory elements; ...</p>

Example 1

Explanation	The following XML example shows the use of citation in context. (In MD_DataIdentification)
Value	
XML	<pre> <gmd:MD_Metadata...> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> <gmd:citation> ... </gmd:citation> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata...> </pre>

Example 2

Explanation	The following XML example shows the use of citation in context. (In SV_Service Identification)
Value	
XML	<pre> <gmd:MD_Metadata...> ... <gmd:identificationInfo> <gmd:SV_ServiceIdentification> <gmd:citation> ... </gmd:citation> ... </gmd:SV_ServiceIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata...> </pre>

Identification Abstract

Name (Number)	abstract (25) UML
Short Name	idAbs
Definition	brief narrative summary of the content of the resource(s)
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose The identification abstract provides additional information about the resource. This may allow users to obtain a better appreciation of the resource and assist them to determine fitness for purpose.

Guidance The abstract should provide sufficient information, such as key words, to adequately describe the content of the resource. Careful consideration should be given when preparing an abstract as it is an important element for the assessment of a resource.

Example

Explanation	The following XML example shows the use of abstract in context.
Value	The Digital Cadastral Database (DCDB) is now a legacy digital map that contained a vector based representation of all land parcel boundaries and most other legal boundaries for all of New Zealand. In addition it contained a centreline representation of all legal roads. It reflected the current cadastral pattern and was maintained through the processing of new subdivision plans. The DCDB was completely replaced in July 2002 by the Landonline Survey and Title Service.
XML	<pre> ... </gmd:citation> <gmd:abstract> <gco:CharacterString>The Digital Cadastral Database (DCDB) is now a legacy digital map that contained a vector based representation of all land parcel boundaries and most other legal boundaries for all of New Zealand. In addition it contained a centreline representation of all legal roads. It reflected the current cadastral pattern and was maintained through the processing of new subdivision plans. The DCDB was completely replaced in July 2002 by the Landonline Survey and Title Service. </gco:CharacterString> </gmd:abstract> ... </pre>

Identification Purpose

Name (Number)	purpose (26) UML
Short Name	idPurp
Definition	summary of the intentions with which the resource(s) was developed
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

This Purpose element is similar to the [Abstract](#) element in that it amplifies the results of resource searches to permit users to obtain a better appreciation of the resource and assist determine fitness for purpose. This element will not be used as a search criteria.

This element allows for a free text description of why the resource was developed.

Guidance

Free text

Example

Explanation	The following XML example shows the use of purpose in context.
Value	The Digital Cadastral Database (DCDB) was originally developed to automate the production of a new series of metric scale record sheet maps and support the efficient recording of cadastral surveys.
XML	<pre> ... </gmd:citation> <gmd:purpose> <gco:CharacterString>The Digital Cadastral Database (DCDB) was originally developed to automate the production of a new series of metric scale record sheet maps and support the efficient recording of cadastral surveys. </gco:CharacterString> </gmd:purpose> ... </pre>

Identification Credit

Name (Number)	credit (27) [UML]
Short Name	idCredit
Definition	recognition of those who contributed to the resource(s)
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Identification Status

Name (Number)	status (28) [UML]
Short Name	idStatus
Definition	status of the resource(s)
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	MD_ProgressCode <<Codelist>>

Meaning & Purpose This element is the status of the processing of the resource or the progress of a review. Values for this element are selected from a code list.

Guidance Choose an appropriate term from the MD_ProgressCode codelist {see section 6.16.4}; for example, 'completed'.

Example

Explanation	The following XML example shows a status of processing of a resource as 'ongoing'
Value	onGoing
XML	<pre> ... <gmd:status> <gmd:MD_ProgressCode codeList="http://asdd.ga.gov.au/asdd/profileinfo/gmxCodelists.xml#MD_ProgressCode" codeListValue="onGoing" /> </gmd:status> ... </pre>

Identification Point of Contact

Name (Number)	pointOfContact (29) [UML]
Short Name	idPoC
Definition	identification of, and means of communication with, person(s) and organizations(s) associated with the resources(s)
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	CI_ResponsibleParty <<DataType>>

Meaning & Purpose The identification point of contact contains details about the individual, organisation and/or position associated with the resource(s); it facilitates further enquiries about the resource(s).

Guidance This contains no specific value in its own right but contains an instance of [CI_ResponsibleParty](#).

The metadata content creator is not required to record any information against this element.

Example

Explanation	A generic container for the contact point of the resource
Value	
XML	<pre> ... <gmd:pointOfContact> <gmd:CI_ResponsibleParty> ... </gmd:CI_ResponsibleParty> </gmd:pointOfContact> ... </pre>

Resource Maintenance

Name (Number)	Role name: resourceMaintenance (30) [UML]
Short Name	resMaint
Definition	provides information about the frequency of resource updates, and the scope of those updates
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_MaintenanceInformation

Meaning & Purpose

Guidance

Example

Graphic Overview

Name (Number)	Role name: graphicOverview (31) [UML]
Short Name	graphOver
Definition	provides a graphic that illustrates the resource(s) (should include a legend for the graphic)
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_BrowseGraphic

Meaning & Purpose

Guidance

Example

Resource Format

Name (Number)	<i>Role name:</i> resourceFormat (32) [UML]
Short Name	dsFormat
Definition	provides a description of the format of the resource(s)
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_Format

Meaning & Purpose

Guidance

Example

Descriptive Keywords

Name (Number)	<i>Role name:</i> descriptiveKeywords (33) [UML]
Short Name	descKeys
Definition	provides category keywords, their type, and reference source
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_Keywords

Meaning & Purpose

Guidance

Example

Identification Specific Usage

Name (Number)	Role name: resourceSpecificUsage (34) [UML]
Short Name	idSpecUse
Definition	provides basic information about specific application(s) for which the resource(s) has/have been or is being used by different users
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD Usage

Meaning & Purpose

Guidance

Example

Resource Constraints

Name (Number)	Role name: resourceConstraints (35) [UML]
Short Name	resConst
Definition	provides information about constraints which apply to the resource(s)
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD Constraints

Meaning & Purpose

Guidance

Example

Aggregation Information

Name (Number)	Role name: aggregationInfo (35.1) [UML]
Short Name	aggrInfo
Definition	provides aggregate dataset information
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_AggregateInformation

Meaning & Purpose This element identifies various details on aggregate datasets associated with the resource.

Guidance

Example

Explanation	The following XML example shows the use of the Aggregation Information in context
Value	
XML	<pre> <gmd:MD_Metadata...> ... <gmd:MD_AggregateInformation> <gmd:aggregateDataSetIdentifier> <gmd:MD_Identifier> ... </gmd:MD_Identifier> </gmd:aggregateDataSetIdentifier> </gmd:MD_AggregateInformation> ... </gmd:MD_Metadata...> </pre>

Data Identification

Name (Number)	MD_DataIdentification (36) [UML]
Short Name	DataIdent
Definition	information required to identify a dataset
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (MD_Identification)
Domain	Lines 37–46 and 24–35.1

Meaning & Purpose The data identification contains information to give a basic description of the resource and includes information about the spatial representation type, spatial resolution, language, character set, topic category and extent. It inherits other elements from the [MD Identification](#) class such as citation, abstract, point of contact and resource format.

Please note: for the purpose of describing this element, the reference to 'dataset' in the definition applies to all 'resources'.

Guidance This contains no specific value in its own right.

The metadata content creator is not required to record any information against this element.

Example

Explanation	Example (XML)
Value	
XML	<pre> gmd:MD_Metadata...> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> <gmd:citation> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata...> </pre>

Spatial Representation Type

Name (Number)	spatialRepresentationType (37) [UML]
Short Name	spatRpType
Definition	method used to spatially represent geographic information
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	MD_SpatialRepresentationTypeCode <<CodeList>>

Meaning & Purpose

Guidance

Example

Data Scale

Name (Number)	spatialResolution (38) [UML]
Short Name	dataScale
Definition	factor which provides a general understanding of the density of spatial data in the dataset
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	MD Resolution <<Union>>

Meaning & Purpose The resolution, either as scale or distance, identifies the spatial resolution of the information contained within the resource.

Guidance This contains no specific value in its own right but contains an instance of [MD Resolution](#).

The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows the use of spatialResolution in context.
Value	
XML	<pre> <gmd:MD_DataIdentification> ... <gmd:spatialResolution> <gmd:MD_Resolution> ... </gmd:MD_Resolution> </gmd:spatialResolution> <gmd:language> ... </gmd:MD_DataIdentification> </pre>

Data Language

Name (Number)	language (39) UML
Short Name	dataLang
Definition	language(s) used within the dataset
Obligation/Condition	Mandatory
Maximum Occurrence	No maximum
Data Type	CharacterString
Domain	ISO 639-2 , other parts may be used

Meaning & Purpose The data language identifies the language used in the resource. This may differ from the language used within the metadata record.

Guidance Default is “eng”.

The code list values from “[Codes for the Representation of Names of Languages](#)” must be used. Language values are chosen from a standard set. The 3-letter language code value “eng” should be used in preference to 2-letter codes. A full list of language codes is available at <http://lcweb.loc.gov/standards/iso639-2/langcodes.html>.

Only if there is a specialised language being used (e.g. dialects) then the 3-letter code should not be used. then combinations of language and country codes (e.g. “en-gb”) may be used; e.g. “sp-ar”.

Where a single resource contains more than one language, then record the predominant language used. Where a resource exists separately in a different language, it is treated as a separate resource.

Please note: for the purpose of describing this element, the reference to ‘dataset’ in the definition applies to all ‘resources’.

Example 1

Explanation	The following XML example shows the use of language in context. (not using a code list - default)
Value	eng (English)
XML	<pre><gmd:language> <gco:CharacterString>eng</gco:CharacterString> </gmd:language></pre>

Example 2

Explanation	The following XML example shows the use of language in context. (not using a code list - default)
Value	mao (Maori)
XML	<pre><gmd:language> <gco:CharacterString>mao</gco:CharacterString> </gmd:language></pre>

Example 3

Explanation	The following XML example shows the use of language in context. (using a code list)
Value	eng (English)
XML	<pre><gmd:language> <gmd:LanguageCode codeList="http://www.isotc211.org/2005/resources/Codelist/ ML_gmxCodelists.xml#LanguageCode" codeListValue="eng"> English </gmd:LanguageCode> </gmd:language></pre>

Data Character Set

Name (Number)	characterSet (40) [UML]
Short Name	dataChar
Definition	full name of the character coding standard used for the dataset
Obligation/Condition	Conditional: Mandatory if ISO/IEC 10646-1 not used
Maximum Occurrence	No maximum
Data Type	Class
Domain	MD_CharacterSetCode <<Codelist>>

Meaning & Purpose	The data character set is the code for the character set used in the resource. This element does not describe the character set used within the metadata record (see Metadata Character Set (4))
Guidance	<p>The most commonly used character set is "utf8" which is part of ISO/IEC 10646-1. Hence if "utf8" is used then this element does not require content.</p> <p>characterSet values are chosen from a standard code list as shown in MD_CharacterSetCode. The namespace of this code list is http://asdd.ga.gov.au/asdd/profileinfo/gmxCodelists.xml#MD_CharacterSetCode.</p>

Please note: for the purpose of describing this element, the reference to ‘dataset’ in the definition applies to all ‘resources’.

Example

Explanation	Example (XML)
Value	UTF8
XML	<pre> </gmd:language> <gmd:characterSet> <gmd:MD_CharacterSetCode codeList=" http://asdd.ga.gov.au/asdd/profileinfo/gmxCodeLists.xml#MD_CharacterSetCode" codeListValue="utf8">UTF 8 </gmd:MD_CharacterSetCode> </gmd:characterSet> . . . </pre>

Topic Category

Name (Number)	topicCategory (41) [UML]
Short Name	tpCat
Definition	main theme(s) of the dataset
Obligation/Condition	Conditional: Mandatory if hierarchyLevel equals "dataset" or "series"
Maximum Occurrence	No maximum
Data Type	Class
Domain	MD_TopicCategoryCode <<Enumeration>>

Meaning & Purpose This element allows a search to be restricted to resources pertaining to a particular theme or topic. For example "find all data resources to do with the environment".

As topic category is an important element for searching, careful consideration should be given to its completion when documenting a “dataset” or “series”.

Guidance The topic category must be chosen from the enumeration list [MD_TopicCategoryCode](#), http://asdd.ga.gov.au/asdd/profileinfo/gmxCodeLists.xml#MD_TopicCategoryCode

It is acknowledged there are overlaps between general categories. The user is encouraged to select the one most appropriate.

Example

Explanation	Example (XML)
Value	imageryBaseMapsEarthCover
XML	<pre> ... <gmd:MD_DataIdentification> ... <gmd:topicCategory> <gmd:MD_TopicCategoryCode>imageryBaseMapsEarthCover </gmd:MD_TopicCategoryCode> </gmd:topicCategory> ... </pre>

Environment Description

Name (Number)	environmentDescription (44) [UML]
Short Name	envirDesc
Definition	description of the dataset in the producer's processing environment, including items such as the software, the computer operating system, file name, and the dataset size
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Data Extent

Name (Number)	extent (45) [UML]
Short Name	dataExt
Definition	extent information including the bounding box, bounding polygon, vertical, and temporal extent of the dataset
Obligation/ Condition	Conditional: mandatory if hierarchyLevel equals "dataset", either extent.geographicElement.EX_GeographicBoundingBox or extent.geographicElement.EX_GeographicDescription is required.
Maximum Occurrence	No maximum
Data Type	Class
Domain	EX_Extent <<DataType>>

Meaning & Purpose The data extent provides the structure that includes the elements describing the spatial, temporal and vertical extent of a dataset.

This element exists to support the class [EX_Extent](#).

Guidance The data extent contains details about the spatial extent of the resource.

The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows the use of extent in context.
Value	
XML	<pre> ... <gmd:MD_DataIdentification> ... <gmd:extent> <gmd:EX_Extent> ... </gmd:EX_Extent> </gmd:extent> ... </pre>

Supplemental Information

Name (Number)	supplementalInformation (46) [UML]
Short Name	suppInfo
Definition	any other descriptive information about the dataset
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose This element exists to support additional information which does not logically reside in other defined elements such as abstract, lineage, source, purpose, specific usage, credit etc

Guidance This element should be used for descriptive information as a last resort. Preferably information should be placed in specific elements such as those listed above.

Example

Explanation	The following XML example shows a bibliographic list as it does not fit in other elements
Value	<i>a single long string of bibliographic information</i>
XML	<pre> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> ... <gmd:supplementalInformation> <gco:CharacterString>a single long string of bibliographic information</gco:CharacterString> </gmd:supplementalInformation> </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </pre>

Service Identification

Name (Number)	SV_ServiceIdentification (47) [UML]
Short Name	SerIdent
Definition	identification of capabilities which a service provider makes available to a service user through a set of interfaces that define a behaviour - See ISO 19119 for further information
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (MD Identification)
Domain	Lines 24-35.1

Meaning & Purpose The service identification contains information to describe the service and includes information about the service type and the operations it contains, and they also contain reference to the resource it operates on. It inherits other elements from the [MD Identification](#) class such as citation, abstract and point of contact.

Guidance The metadata content creator is not required to record any information against this element.

[****]

Example

Explanation	The following XML example shows the use of SV_ServiceIdentification in context.
Value	
XML	<pre> <gmd:MD_Metadata...> ... <gmd:identificationInfo> <gmd:SV_ServiceIdentification> <srv:citation> ... </srv:SV_ServiceIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata...> </pre>

7.2. 2 Browse Graphic Information

Browse Graphic

Name (Number)	MD_BrowseGraphic (48) [UML]
Short Name	BrowGraph
Definition	graphic that provides an illustration of the dataset (should include a legend for the graphic)
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use Maximum Occurrence from referencing object
Data Type	Aggregated Class (MD_Identification)
Domain	Lines 49-51

Meaning & Purpose

Guidance

Example

Browse Graphic File Name

Name (Number)	fileName (49) [UML]
Short Name	bgFileName
Definition	name of the file that contains a graphic that provides an illustration of the dataset
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Browse Graphic File Description

Name (Number)	fileDescription (50) [UML]
Short Name	bgFileDesc
Definition	text description of the illustration
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Browse Graphic File Type

Name (Number)	fileType (51) [UML]
Short Name	bgFileType
Definition	format in which the illustration is encoded Examples: CGM, EPS, GIF, JPEG, PBM, PS, TIFF, XWD
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

7.2.3 Keyword Information

Keywords

Name (Number)	MD_Keywords (52) [UML]
Short Name	Keywords
Definition	keywords, their type and reference source
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Identification)
Domain	Lines 53-55

Meaning & Purpose To facilitate searching.

Guidance

Example

Keyword

Name (Number)	keyword (53) [UML]
Short Name	keyword
Definition	commonly used word(s) or formalised word (s) or phrase(s) used to describe the subject
Obligation/Condition	Mandatory
Maximum Occurrence	No maximum
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Keyword Type

Name (Number)	type (54) [UML]
Short Name	keyTyp
Definition	subject matter used to group similar keywords
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	MD_KeywordTypeCode <<Codelist>>

Meaning & Purpose

Guidance

Example

Thesaurus Name

Name (Number)	thesaurusName (55) [UML]
Short Name	thesaName
Definition	name of the formally registered thesaurus or a similar authoritative source or keywords
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	CI_Citation <<DataType>>

Meaning & Purpose

Guidance

Example

7.2. 4 Representative Fraction Information

Metadata Representative Fraction

Name (Number)	MD_RepresentativeFraction (56) [UML]
Short Name	RepFract
Definition	derived from ISO 19103 Scale where MD_RepresentativeFraction.denominator = 1 / Scale.measure And Scale.targetUnits = Scale.sourceUnits
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class <<Data Type>>
Domain	Line 57

Meaning & Purpose

Guidance

Example

Reference Denominator

Name (Number)	denominator (57) [UML]
Short Name	rfDenom
Definition	the number below the line in a vulgar fraction
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Integer
Domain	Integer > 0

Meaning & Purpose

Guidance

Example

7.2.5 Resolution Information

Resolution

Name (Number)	MD_Resolution (59) UML
Short Name	Resol
Definition	level of detail expressed as a scale factor or a ground distance
Obligation/ Condition	Use obligation from referencing object.
Maximum Occurrence	Use maximum occurrence from referencing object.
Data Type	Class <<Union>>
Domain	Lines 60-61

Meaning and Purpose	<p>The resolution identifies information about either the equivalent scale or distance.</p> <p>Exists to support its children elements and does not contain values in its own right.</p>
Guidance	<p>This element could be a sub-element of spatialResolution (38).</p> <p>The metadata element content creator is not required to record any information against this element.</p> <p>ANZLIC recommends that distance be used instead of scale as it is more appropriate for current information management practices.</p>

Example

Explanation	The following XML example shows the use of the resolution class and distance element in context.
Value	
XML	<pre> <gmd:spatialResolution> <gmd:MD_Resolution> <gmd:distance> ... </gmd:distance> </gmd:MD_Resolution> </gmd:spatialResolution> </pre>

Equivalent Scale

Name (Number)	equivalentScale (60) [UML]
Short Name	equScale
Definition	level of detail expressed as the scale of a comparable hardcopy map or chart
Obligation/Condition	Conditional: mandatory if the distance not documented
Maximum Occurrence	1
Data Type	Class
Domain	MD_RepresentativeFraction <<DataType>>

Meaning & Purpose

Guidance

Example

Scale Distance

Name (Number)	distance (61) [UML]
Short Name	scaleDist
Definition	ground sample distance
Obligation/Condition	Conditional: mandatory if equivalentScale not documented
Maximum Occurrence	1
Data Type	Class
Domain	Distance

Meaning and Purpose The distance element identifies the resolution of the information in real world units.

Guidance ANZLIC preferred way of providing information about the resolution. This is a numeric value and needs to be accompanied by the unit of measure (uom; e.g. metres).

Example

Explanation	The following XML example shows the use of resolution of the information in real world units.
Value	80 metres
XML	<pre> <gmd:spatialResolution> <gmd:MD_Resolution> <gmd:distance> <gco:Distance uom="metres">80</gco:Distance> </gmd:distance> </gmd:MD_Resolution> </gmd:spatialResolution> </pre>

7.2. 6 Usage Information

Usage

Name (Number)	MD_Usage (62) UML
Short Name	Usage
Definition	brief description of ways in which the resource(s) is/are currently or has been used
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Identification)
Domain	Lines 63-66

Meaning & Purpose

Guidance

Example

Specific Usage

Name (Number)	specificUsage (63) [UML]
Short Name	specUsage
Definition	brief description of the resource and/or resource series usage
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Usage Date & Time

Name (Number)	usageDateTime (64) [UML]
Short Name	usageDate
Definition	date and time of the first use or range of uses of the resource and/or resource series
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	DateTime (B.4.2)

Meaning & Purpose

Guidance

Example

User Determined Limitations

Name (Number)	userDeterminedLimitations (65) [UML]
Short Name	useDetLim
Definition	applications, determined by the user for which the resource and/or resource series is not suitable
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free Text

Meaning & Purpose

Guidance

Example

User Contact Information

Name (Number)	userContactInfo (66) [UML]
Short Name	usrCntInfo
Definition	identification of and means of communicating with person(s) and organization(s) using the resource (s)
Obligation/Condition	Mandatory
Maximum Occurrence	No maximum
Data Type	Class
Domain	CI_ResponsibleParty <<DataType>>

Meaning & Purpose

Guidance

Example

7.2. 7 Aggregation Information

Aggregate Information

Name (Number)	MD_AggregateInformation (66.1) [UML]
Short Name	AggregateInfo
Definition	aggregate dataset information
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Identification)
Domain	Lines 66.2-66.5

Meaning & Purpose

Guidance

Example

Aggregate Dataset Name

Name (Number)	aggregateDataSetName (66.2) [UML]
Short Name	aggrDSName
Definition	citation information about the aggregate dataset
Obligation/ Condition	Conditional: mandatory if aggregateDataSetIdentifier not documented
Maximum Occurrence	1
Data Type	Class
Domain	CI_Citation << DataType >>

Meaning & Purpose

Guidance

Example

Aggregate Dataset Identifier

Name (Number)	aggregateDataSetIdentifier (66.3) [UML]
Short Name	aggrDSIdent
Definition	identifier information about aggregate dataset
Obligation/ Condition	Conditional: mandatory if aggregateDataSetName not documented
Maximum Occurrence	1
Data Type	Class
Domain	MD_Identifier <<DataType>>

Meaning & Purpose

Guidance

Example

Association Type

Name (Number)	associationType (66.4) [UML]
Short Name	assocType
Definition	association type of the aggregate dataset
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	DS_AssociationTypeCode <<Codelist>>

Meaning & Purpose

Guidance

Example

Initiative Type

Name (Number)	initiativeType (66.5) [UML]
Short Name	initType
Definition	type of initiative under which the aggregate dataset was produced
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	DS_InitiativeTypeCode <<Codelist>>

Meaning & Purpose

Guidance

Example

7.3 Constraint Information (includes legal and security)

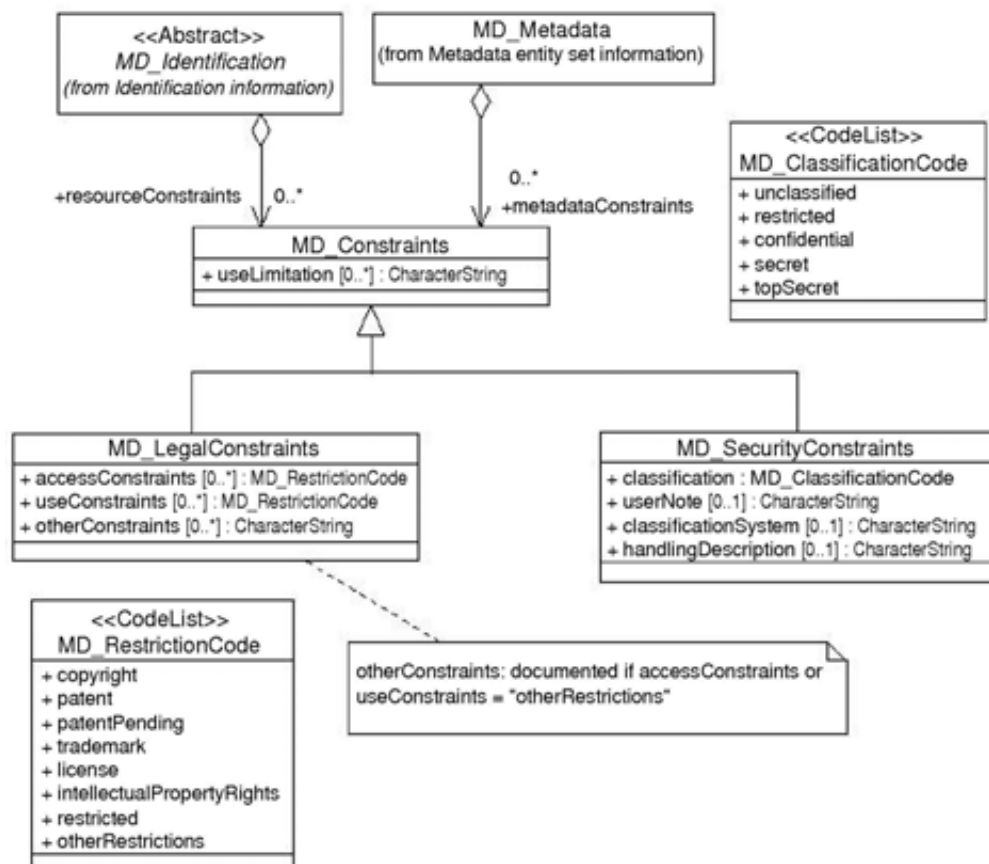


Fig 6. Constraint information

(Source : AS/NZS ISO 19115:2005, A.3 constraint information)

7.3.1 Constraints

Name (Number)	MD_Constraints (67) [UML]
Short Name	Consts
Definition	restrictions on the access and use of a resource or metadata
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Metadata and MD_Identification)
Domain	Line 68

Meaning & Purpose

Guidance

Example

Use Limitation

Name (Number)	useLimitation (68) [UML]
Short Name	useLimit
Definition	limitation affecting the fitness for use of the resource or metadata. Example, "not to be used for navigation"
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	CharacterString
Domain	Free text

Meaning & Purpose This element provides an opportunity for resource custodians to identify that there are specific limitations of the resource for a given use.

Guidance This element should be used to provide information on the limitations of the use of the resource. In particular, it should inform users how the resource should not be used.

Example

Explanation	The following XML example indicates that the resource is not suitable for navigational purposes.
Value	Not to be used for navigation
XML	<pre>... <gmd:useLimitation> <gco:CharacterString>Not to be used for navigation </gco:CharacterString> </gmd:useLimitation> ...</pre>

7.3.2 Legal Constraints

Name (Number)	MD_LegalConstraints (69) [UML]
Short Name	LegConsts
Definition	restrictions and legal prerequisites for accessing and using the resource or metadata
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	No maximum
Data Type	Specified Class (MD Constraints)
Domain	Lines 70-72 and 68

Meaning & Purpose

Guidance

Example

Access Constraints

Name (Number)	accessConstraints (70) [UML]
Short Name	accessConsts
Definition	access constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations on obtaining the resource or metadata
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	MD_RestrictionCode <<Codelist>>

Meaning & Purpose

Guidance

Example

Use Constraints

Name (Number)	useConstraints (71) [UML]
Short Name	useConsts
Definition	constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations or warnings on using the resource or metadata
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	MD_RestrictionCode <<CodeList<<

Meaning & Purpose

Guidance

Example

Other Constraints

Name (Number)	otherConstraints (72) [UML]
Short Name	othConsts
Definition	other restrictions and legal prerequisites for accessing and using the resource or metadata
Obligation/Condition	Conditional: mandatory if access Constraints or useConstraints equal "otherRestrictions"
Maximum Occurrence	No maximum
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

7.3.3 Security Constraints

Name (Number)	MD_SecurityConstraints (73) [UML]
Short Name	SecConsts
Definition	handling restrictions imposed on the resource or metadata for national security or similar security concerns
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (MD_Constraints)
Domain	Lines 74-77 and 68

Meaning & Purpose

Guidance

Example

Classification

Name (Number)	classification (74) [UML]
Short Name	class
Definition	name of the handling restrictions on the resource or metadata
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	MD_ClassificationCode <<CodeList>>

Meaning & Purpose

This element provides the classification placed on the resource or metadata indicating its handling restrictions. Values for this element are selected from a code list.

Guidance

Choose an appropriate term from the MD_ClassificationCode codelist {see section 6.16.10}; for example, 'topSecret'.

Example

Explanation	The following XML example identifies that the resource
Value	in-confidence

XML	<pre> ... <gmd:MD_SecurityConstraints> <gmd:classification> <gmd:MD_ClassificationCode codeList="http://asdd.ga.gov.au/asdd/profileinfo/australianC lassificationCode.xml#MD_ClassificationCode" codeListValue="in-confidence" /> </gmd:classification> ... </gmd:MD_SecurityConstraints> ... </pre>
-----	--

User Note

Name (Number)	userNote (75) [UML]
Short Name	userNote
Definition	explanation of the application of the legal constraints or other restrictions and legal prerequisites for obtaining and using the resource or metadata
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Classification System

Name (Number)	classificationSystem (76) [UML]
Short Name	classSys
Definition	name of the classification system
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Handling Description

Name (Number)	handlingDescription (77) [UML]
Short Name	handDesc
Definition	additional information about the restrictions on handling the resource or metadata
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

7.4 Data Quality Information

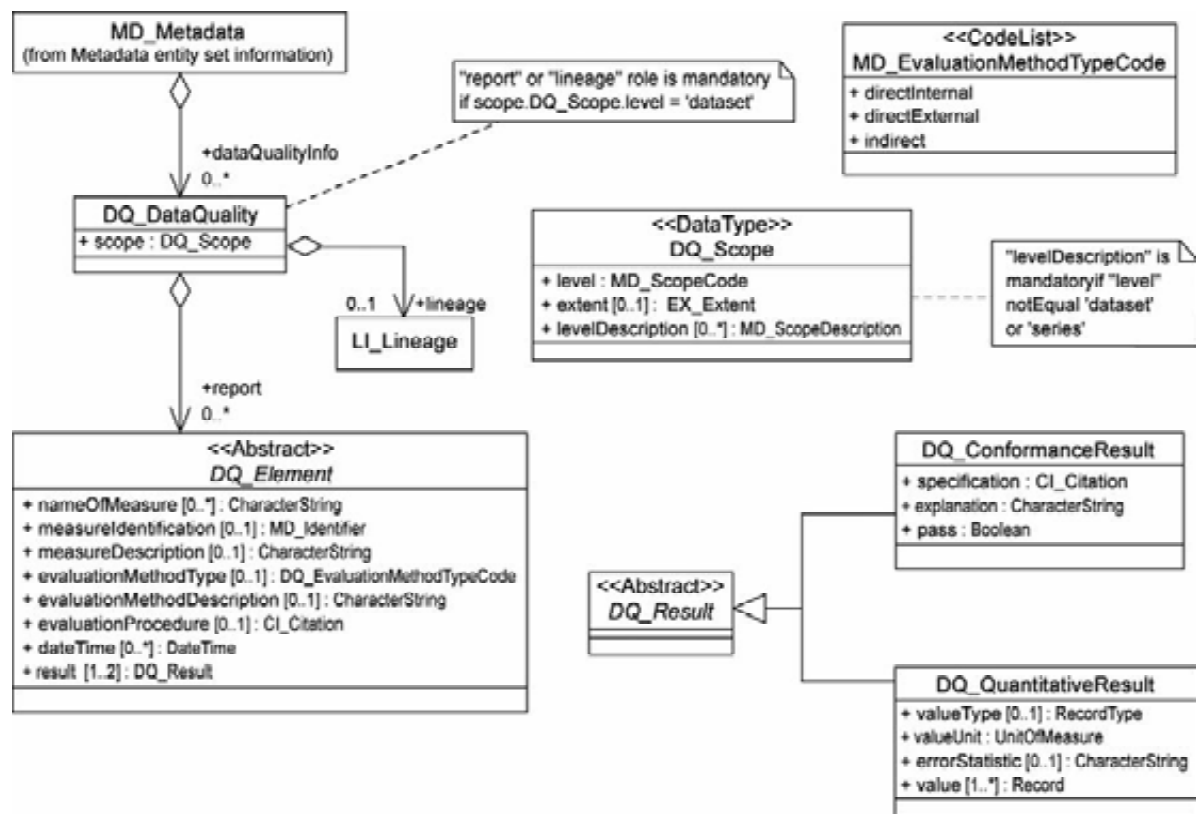


Fig 7. Data quality information

(Source : ISO 19115:2003/Cor 1:2006, Figure A.4 Data quality information)

7.4.1 General

Data Quality

Name (Number)	DQ_DataQuality (78) [UML]
Short Name	DataQual
Definition	quality information for the data specified by a data quality scope
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	AggregateClass (MD_Metadata)
Domain	Lines 79-81

Meaning & Purpose

Guidance

Example

Data Quality Scope

Name (Number)	scope (79) [UML]
Short Name	dqScope
Definition	the specific data to which the data quality information applies
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	DQ_Scope <<DataType>>

Meaning & Purpose

Guidance

Example

Data Quality Report

Name (Number)	report (80) [UML]
Short Name	dqReport
Definition	quantitative quality information for the data specified by the scope
Obligation/ Condition	Conditional: mandatory if lineage not provided
Maximum Occurrence	No maximum
Data Type	Association
Domain	DQ_Element <<Abstract>>

Meaning & Purpose

Guidance

Example

Data Lineage

Name (Number)	lineage (81) [UML]
Short Name	dataLineage
Definition	non-quantitative quality information about the lineage of the data specified by the scope
Obligation/ Condition	Conditional: mandatory if report not provided
Maximum Occurrence	1
Data Type	Association
Domain	LI_Lineage

Meaning & Purpose The lineage element provides the structure that can contain a lineage statement, processing steps and source.

 This element exists to support the class LI_Lineage

Guidance This element has no specific value but provides the structure for an instance of the class LI_Lineage.

 The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows lineage in context
Value	
XML	<pre> ... <gmd:dataQualityInfo> <gmd:DQ_DataQuality> <gmd:scope> <gmd:DQ_Scope> ... </gmd:DQ_Scope> </gmd:scope> ... <gmd:lineage> <gmd:LI_Lineage> ... </gmd:LI_Lineage> </gmd:lineage> </gmd:DQ_DataQuality> </gmd:dataQualityInfo> ... </pre>

7.4.2 Lineage Information

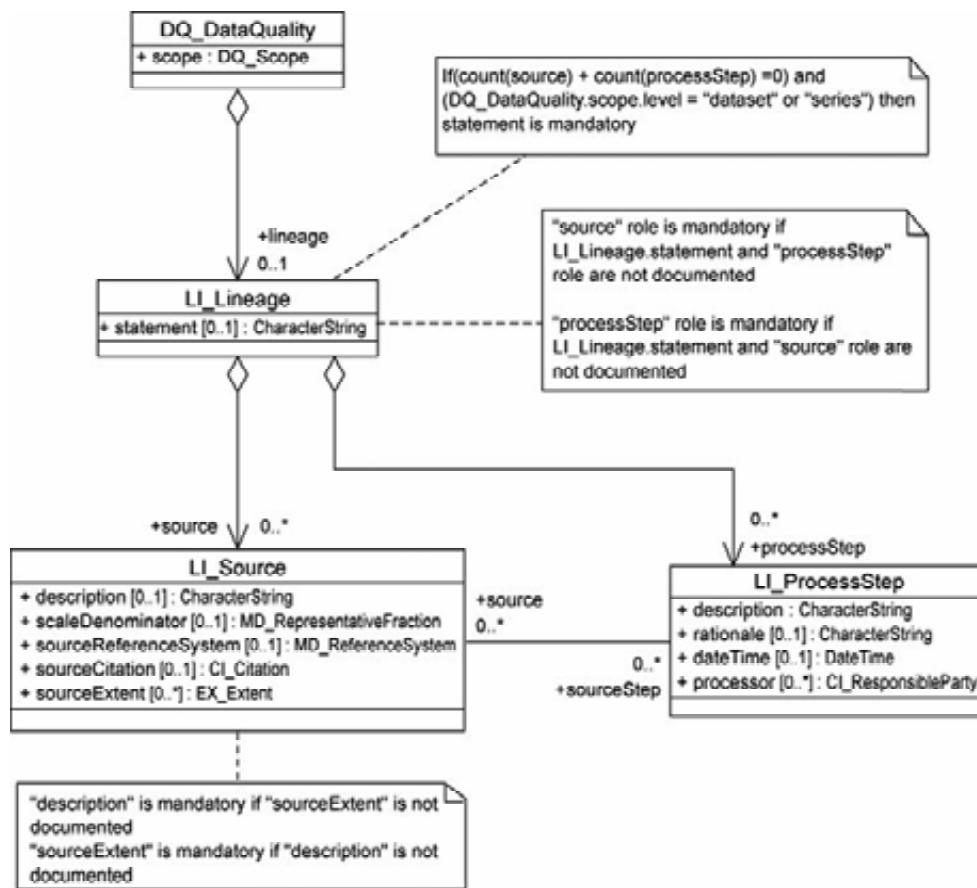


Fig 8. Lineage information

(Source : ISO 19115:2003/Cor 1:2006, Figure A.5 Lineage information)

General

Lineage

Name (Number)	LI_Lineage (82) [UML]
Short Name	Lineage
Definition	information about the events or source data used in constructing the data specified by the scope or lack of knowledge about lineage
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (DQ_DataQuality)
Domain	Lines 83-85

Meaning & Purpose

Exists to support its children elements and does not contain values in its own right.

LI_Lineage element provides the structure that can contain a lineage statement, processing steps and source.

Guidance

No value is required because the XML element LI_Lineage is an entity to store further information. It may contain statement, processStep and / or source elements.

The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows LI_Lineage in context
Value	
XML	<pre> ... <gmd:dataQualityInfo> <gmd:DQ_DataQuality> <gmd:scope> <gmd:DQ_Scope> ... </gmd:DQ_Scope> </gmd:scope> ... <gmd:lineage> <gmd:LI_Lineage> ... </gmd:LI_Lineage> </gmd:lineage> </gmd:DQ_DataQuality> </gmd:dataQualityInfo> ... </pre>

Statement

Name (Number)	statement (83) [UML]
Short Name	statement
Definition	general explanation of the data producer's knowledge about the lineage of a dataset
Obligation/Condition	Conditional: mandatory if DQ_Quality.scope.DQ_Scope.level = "dataset" or "series"
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

This element provides a statement of the history of the resource. It can also include a textual explanation of the processing steps and source of the resource, although these attributes would be better described in their specific elements.

Guidance

The statement should be a free text description of the history of the

resource but limited to the specified scope. It should contain as much information as is available.

Example

Explanation	The following XML example shows part of a lineage statement in context
Value	The land uses were collected during mid-1999 through updating and validating...
XML	<pre> ... <gmd:dataQualityInfo> <gmd:DQ_DataQuality> <gmd:scope> <gmd:DQ_Scope> ... </gmd:DQ_Scope> </gmd:scope> ... <gmd:lineage> <gmd:LI_Lineage> <gmd:statement> <gco:CharacterString>The land uses were collected during mid-1999 through updating and validating ... </gco:CharacterString> </gmd:statement> ... </gmd:LI_Lineage> </gmd:lineage> </gmd:DQ_DataQuality> </gmd:dataQualityInfo> ... </pre>

Process Step

Name (Number)	Role name: processStep (84) [UML]
Short Name	prcStep
Definition	information about events in the life of a dataset specified by the scope
Obligation/Condition	Conditional: mandatory if statement and source not provided
Maximum Occurrence	No maximum
Data Type	Association
Domain	LI_ProcessStep

Meaning & Purpose

The processStep element provides the structure that can contain information about each of the steps involved in generating the resource.

This element exists to support the class LI_ProcessStep

Guidance

This element has no specific value but provides the structure for an instance of the class LI_ProcessStep.

The metadata content creator is not required to record any information

against this element.

Example

Explanation	The following XML example shows processStep in context
Value	
XML	<pre> ... <gmd:dataQualityInfo> <gmd:DQ_DataQuality> <gmd:scope> <gmd:DQ_Scope> ... </gmd:DQ_Scope> </gmd:scope> ... <gmd:lineage> <gmd:LI_Lineage> ... <gmd:processStep> <gmd:LI_ProcessStep> ... </gmd:LI_ProcessStep> </gmd:processStep> ... </gmd:LI_Lineage> </gmd:lineage> </gmd:DQ_DataQuality> </gmd:dataQualityInfo> ... </pre>

Data Source

Name (Number)	Role name: source (85) [UML]
Short Name	dataSource
Definition	information about the source data used in creating the data specified by the scope
Obligation/ Condition	Conditional: mandatory if statement and processStep not provided
Maximum Occurrence	No maximum
Data Type	Association
Domain	LI_Source

Meaning & Purpose The source element provides the structure that can contain information about each source that was used to generate the resource.

This element exists to support the class `LI_Source`.

Guidance This element has no specific value but provides the structure for an instance of the class `LI_Source`.

The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows dataSource in context
Value	
XML	<pre> ... <gmd:dataQualityInfo> <gmd:DQ_DataQuality> <gmd:scope> <gmd:DQ_Scope> ... </gmd:DQ_Scope> </gmd:scope> ... <gmd:lineage> <gmd:LI_Lineage> ... <gmd:source> <gmd:LI_Source> ... </gmd:LI_Source> </gmd:source> ... </gmd:LI_Lineage> </gmd:lineage> </gmd:DQ_DataQuality> </gmd:dataQualityInfo> ... </pre>

Process Step Information

Process Step

Name (Number)	LI_ProcessStep (86) [UML]
Short Name	ProcessStep
Definition	information about an event or transformation in the life of a dataset including the process used to maintain the dataset
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (LI_Lineage and LI_Source)
Domain	Lines 87-91

Meaning & Purpose Exists to support its children elements and does not contain values in its own right.
 LI_ProcessStep element provides the structure that can contain a description, rationale, date/time, processor and source.

Guidance No value is required because the XML element LI_ProcessStep is an entity to store further information. It must contain a description and may contain rationale, dateTime, processor and source elements.

The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows LI_ProcessStep in context
Value	
XML	<pre> ... <gmd:dataQualityInfo> <gmd:DQ_DataQuality> <gmd:scope> <gmd:DQ_Scope> ... </gmd:DQ_Scope> </gmd:scope> ... <gmd:lineage> <gmd:LI_Lineage> ... <gmd:processStep> <gmd:LI_ProcessStep> <gmd:description> ... </gmd:description> ... </gmd:LI_ProcessStep> </gmd:processStep> ... </gmd:LI_Lineage> </gmd:lineage> </gmd:DQ_DataQuality> </gmd:dataQualityInfo> ... </pre>

Description

Name (Number)	description (87) [UML]
Short Name	stepDesc
Definition	description of the event, including related parameters and tolerances
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose This element describes a step in the process, one of the many steps used to create the resource.

Guidance The description should be free text describing an individual process

step that was done to a source or applied to generate the resource. This must be limited to the specified scope. It should contain as much information as is available.

Example

Explanation	This XML shows an example of description of the process that removes "slivers" of polygons within a dataset.
Value	Slivers were removed by applying a tolerance of 3 metres to the polygons.
XML	<pre> ... <gmd:dataQualityInfo> <gmd:DQ_DataQuality> <gmd:scope> <gmd:DQ_Scope> ... </gmd:DQ_Scope> </gmd:scope> ... <gmd:lineage> <gmd:LI_Lineage> ... <gmd:processStep> <gmd:LI_ProcessStep> <gmd:description> <gco:CharacterString> Slivers were removed by applying a tolerance of 3 metres to the polygons. </gco:CharacterString> </gmd:description> ... </gmd:LI_ProcessStep> </gmd:processStep> ... </gmd:LI_Lineage> </gmd:lineage> </gmd:DQ_DataQuality> </gmd:dataQualityInfo> ... </pre>

Rationale

Name (Number)	rationale (88) [UML]
Short Name	stepRat
Definition	requirement or purpose for the process step
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Date & Time

Name (Number)	dateTime (89) [UML]
Short Name	stepDateTm
Definition	date and time or range of date and time on or over which the process step occurred
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	DateTime (B.4.2)

Meaning & Purpose

Guidance

Example

Processor

Name (Number)	processor (90) [UML]
Short Name	stepProc
Definition	identification of, and means of communication with, person(s) and organization(s) associated with the process step
Obligation/ Condition	Optional
Maximum Occurrence	No Maximum
Data Type	Class
Domain	CI_ResponsibleParty << DataType >> (B.3.2)

Meaning & Purpose

Guidance

Example

Processor Source

Name (Number)	source (91) [UML]
Short Name	stepSrc
Definition	information about the source data used in creating the data specified by the scope
Obligation/ Condition	Optional
Maximum Occurrence	No Maximum
Data Type	Association
Domain	LI_Source (B.2.4.2.3)

Meaning & Purpose

Guidance

Example

Source Information**Source**

Name (Number)	LI_Source (92) [UML]
Short Name	Source
Definition	information about the source data used in creating the data specified by the scope
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (LI_Lineage and LI_ProcessStep)
Domain	Lines 93-98

Meaning & Purpose

Guidance

Example

Description

Name (Number)	description (93) [UML]
Short Name	srcDesc
Definition	detailed description of the level of the source data
Obligation/Condition	Conditional. Mandatory if sourceExtent not provided.
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Scale Denominator

Name (Number)	scaleDenominator (94) [UML]
Short Name	srcScale
Definition	denominator of the representative fraction on a source map
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	MD_RepresentationFraction <<DataType>> (B.2.2.4)

Meaning & Purpose

Guidance

Example

Source Reference System

Name (Number)	sourceReferenceSystem (95) [UML]
Short Name	srcRefSys
Definition	spatial reference system used by the source data
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	MD_ReferenceSystem (B.2.7)

Meaning & Purpose

Guidance

Example

Source Citation

Name (Number)	sourceCitation (96) [UML]
Short Name	srcCitation
Definition	recommended reference to be used for the source data
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	CI_Citation <<DataType>> (B.3.2)

Meaning & Purpose

Guidance

Example

Source Extent

Name (Number)	sourceExtent (97) [UML]
Short Name	srcExt
Definition	information about the spatial, vertical and temporal extent of the source data
Obligation/Condition	Conditional. Mandatory if description not provided.
Maximum Occurrence	No Maximum
Data Type	Class
Domain	EX_Extent << DataType >> (B.3.1)

Meaning & Purpose

Guidance

Example

Source Step

Name (Number)	sourceStep (98) [UML]
Short Name	srcStep
Definition	information about an event in the creation process for the source data
Obligation/Condition	Optional
Maximum Occurrence	No Maximum
Data Type	Association
Domain	LI_ProcessStep (B.2.4.2.2)

Meaning & Purpose

Guidance

Example

7.4.3 Data Quality Element Information

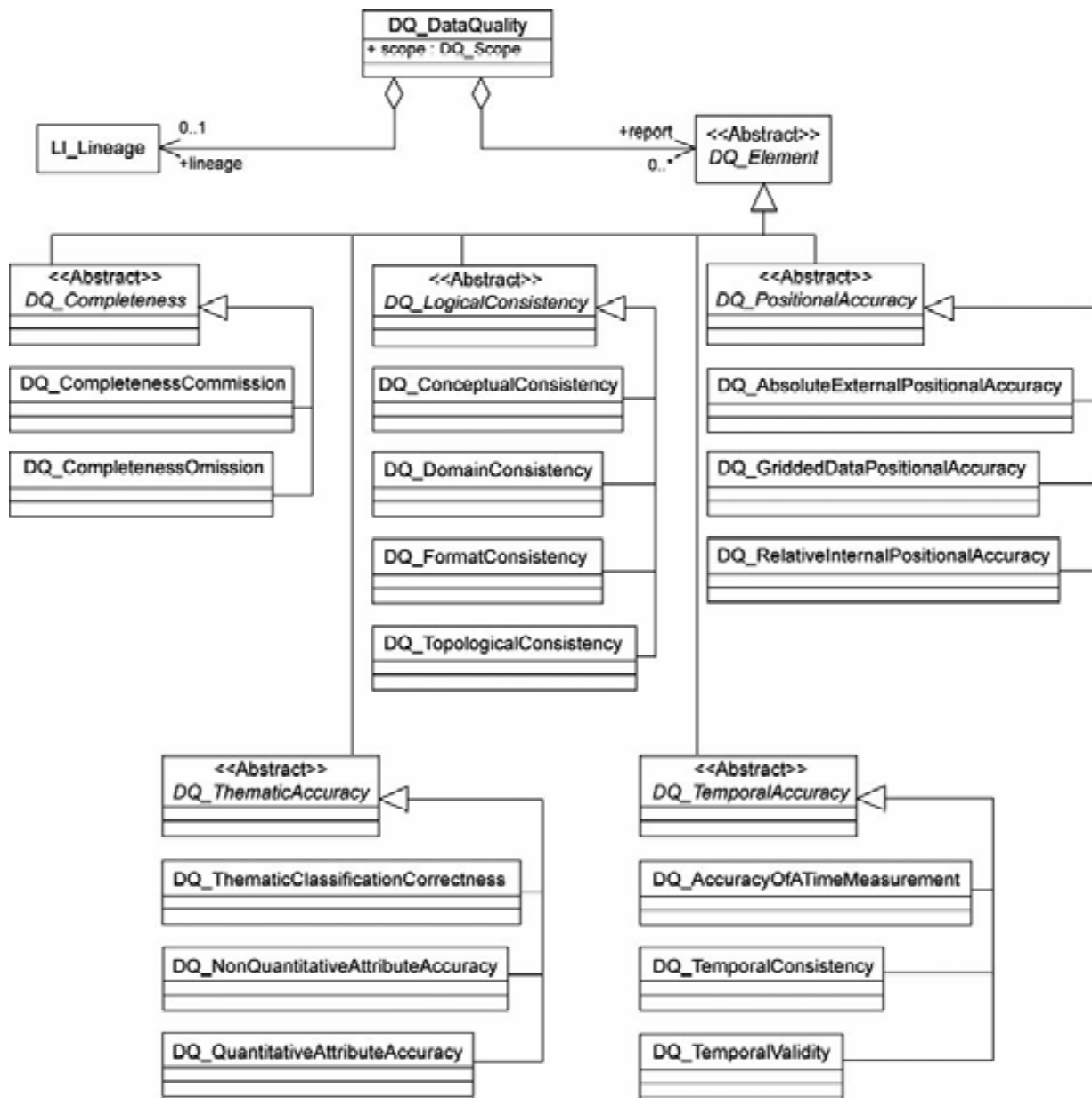


Fig 9. Data quality classes and subclasses

(Source : ISO 19115:2003/Cor 1:2006, Figure A.6 Data quality classes and subclasses)

DQ_Element

Name (Number)	DQ_Element (99) [UML]
Short Name	DQElement
Definition	aspect of quantitative quality information
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (DQ_DataQuality) <<Abstract>>
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Name Of Measure

Name (Number)	nameOfMeasure (100) [UML]
Short Name	measName
Definition	name of the test applied to the data
Obligation/ Condition	Optional
Maximum Occurrence	No Maximum
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Measure Identification

Name (Number)	measureIdentification (101) [UML]
Short Name	measId
Definition	code identifying a registered standard procedure
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	MD_Identifier <<DataType>> (B.2.7.3)

Meaning & Purpose

Guidance

Example

Measure Description

Name (Number)	measureDescription (102) [UML]
Short Name	measDesc
Definition	description of the measure
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Character string
Domain	Free text

Meaning & Purpose

Guidance

Example

Evaluation Method Type

Name (Number)	evaluationMethodType (103) [UML]
Short Name	evalMethType
Definition	type of method used to evaluate quality of the dataset
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	DQ_EvaluationMethodTypeCode <<CodeList>> (B.5.6)

Meaning & Purpose

Guidance

Example

Evaluation Method Description

Name (Number)	evaluationMethodDescription (104) [UML]
Short Name	evalMethDesc
Definition	description of the evaluation method
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Evaluation Procedure

Name (Number)	evaluationProcedure (105) [UML]
Short Name	evalProc
Definition	reference to the procedure information
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	CI_Citation <<DataType>> (B.3.2)

Meaning & Purpose

Guidance

Example

Measure Date and Time

Name (Number)	dateTime (106) [UML]
Short Name	measDateTm
Definition	date or range of dates on which a data quality measure was applied
Obligation/ Condition	Optional
Maximum Occurrence	No Maximum
Data Type	Class
Domain	DateTime (B.4.2)

Meaning & Purpose

Guidance

Example

Measure Result

Name (Number)	result (107) [UML]
Short Name	measResult
Definition	value (or set of values) obtained from applying a data quality measure or the outcome of evaluating the obtained value (or set of values) against a specified acceptable conformance quality level
Obligation/Condition	Mandatory
Maximum Occurrence	2
Data Type	Class
Domain	DQ_Result <<Abstract>>

Meaning & Purpose

Guidance

Example

Data Quality Completeness

Name (Number)	DQ_Completeness (108) [UML]
Short Name	DQComplete
Definition	presence and absence of features, their attributes and their relationships
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_Element) <<Abstract>>
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Completeness Commission

Name (Number)	DQ_CompletenessCommission (109) [UML]
Short Name	DQCompComm
Definition	excess data present in the dataset, as described by the scope
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_Completeness)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Completeness Omission

Name (Number)	DQ_CompletenessOmission (110) [UML]
Short Name	DQCompOm
Definition	data absent from the dataset, as described by the scope
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_Completeness)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Logical Consistency

Name (Number)	DQ_LogicalConsistency (111) [UML]
Short Name	DQLogConsis
Definition	degree of adherence to logical rules of data structure, attribution and relationships (data structure can be conceptual, logical or physical)
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ Element) <<Abstract>>
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Conceptual Consistency

Name (Number)	DQ_ConceptualConsistency (112) [UML]
Short Name	DQConcConsis
Definition	adherence to rules of the conceptual schema
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ LogicalConsistency)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Domain Consistency

Name (Number)	DQ_DomainConsistency (113) [UML]
Short Name	DQDomConsis
Definition	adherence of values to the value domains
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_LogicalConsistency)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Format Consistency

Name (Number)	DQ_FormatConsistency (114) [UML]
Short Name	DQFormConsis
Definition	degree to which data is stored in accordance with the physical structure of the dataset, as described by the scope
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_LogicalConsistency)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Topological Consistency

Name (Number)	DQ_TopologicalConsistency (115) [UML]
Short Name	DQTopConsis
Definition	correctness of the explicitly encoded topological characteristics of the dataset as described by the scope
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_LogicalConsistency)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Positional Accuracy

Name (Number)	DQ_PositionalAccuracy (116) [UML]
Short Name	DQPosAcc
Definition	accuracy of the position of features
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_Element) <<Abstract>>
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Absolute External Positional Accuracy

Name (Number)	DQ_AbsoluteExternalPositionalAccuracy (117) [UML]
Short Name	DQAbsExtPosAcc
Definition	closeness of reported coordinate values to values accepted as or being true
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_PositionalAccuracy)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Gridded Data Positional Accuracy

Name (Number)	DQ_GriddedDataPositionalAccuracy (118) [UML]
Short Name	DQGridDataPosAcc
Definition	closeness of gridded data position values to values accepted as or being true
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_PositionalAccuracy)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Relative Internal Positional Accuracy

Name (Number)	DQ_RelativeInternalPositionalAccuracy (119) [UML]
Short Name	DQRelIntPosAcc
Definition	closeness of the relative positions of features in the scope to their respective relative positions accepted as or being true
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_PositionalAccuracy)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Temporal Accuracy

Name (Number)	DQ_TemporalAccuracy (120) [UML]
Short Name	DQTempAcc
Definition	accuracy of the temporal attributes and temporal relationships of features
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_Element) <<Abstract>>
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Accuracy Of A Time Measurement

Name (Number)	DQ_AccuracyOfATimeMeasurement (121) [UML]
Short Name	DQAccTimeMeas
Definition	correctness of the temporal references of an item (reporting of error in time measurement)
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_TemporalAccuracy)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Temporal Consistency

Name (Number)	DQ_TemporalConsistency (122) [UML]
Short Name	DQTempConsis
Definition	correctness of ordered events or sequences, if reported
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_TemporalAccuracy)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Temporal Validity

Name (Number)	DQ_TemporalValidity (123) [UML]
Short Name	DQTempValid
Definition	validity of data specified by the scope with respect to time
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_TemporalAccuracy)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Thematic Accuracy

Name (Number)	DQ_ThematicAccuracy (124) [UML]
Short Name	DQThemAcc
Definition	accuracy of quantitative attributes and the correctness of non-quantitative attributes and of the classifications of features and their relationships
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_Element) <<Abstract>>
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Thematic Classification Correctness

Name (Number)	DQ_ThematicClassificationCorrectness (125) [UML]
Short Name	DQThemClassCor
Definition	comparison of the classes assigned to features or their attributes to a universe of discourse
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_ThematicAccuracy)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Non Quantitative Attribute Accuracy

Name (Number)	DQ_NonQuantitativeAttributeAccuracy (126) [UML]
Short Name	DQNonQantAttAcc
Definition	accuracy of non-quantitative attributes
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_ThematicAccuracy)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

Data Quality Quantitative Attribute Accuracy

Name (Number)	DQ_QuantitativeAttributeAccuracy (127) [UML]
Short Name	DQQantAttaAcc
Definition	accuracy of quantitative attributes
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_ThematicAccuracy)
Domain	Lines 100-107

Meaning & Purpose

Guidance

Example

7.4. 4 Result Information

Data Quality Result

Name (Number)	<i>DQ_Result</i> (128) [UML]
Short Name	Result
Definition	generalization of more specific result classes
Obligation/ Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class <<Abstract>>
Domain	

Meaning & Purpose

Guidance

Example

Conformance Result

Name (Number)	DQ_ConformanceResult (129) [UML]
Short Name	ConResult
Definition	information about the outcome of evaluating the obtained value (or set of values) against a specified acceptable conformance quality level
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_Result)
Domain	Lines 130-132

Meaning & Purpose Exists to support its children elements and does not contain values in its own right.
This element exists to support the classes specification, explanation and pass.

Guidance This contains no specific value in its own right.
The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows the use of DQ_ConformanceResult in context
Value	
XML	<pre> <gmd:dataQualityInfo> <gmd:DQ_DataQuality> ... <gmd:report> ... <gmd:result> <gmd:DQ_ConformanceResult> <gmd:specification> <gmd:CI_Citation> <gmd:title> <gco:CharacterString> ... </gco:CharacterString> </gmd:title> <gmd:date> <gmd:CI_Date> <gmd:date> <gco>Date>2009</gco>Date> </gmd:date> <gmd:dateType> <gmd:CI_DateTypeCode codeList="http://asdd.ga.gov.au/asdd/profileinfo/gmxCodelists. </pre>

```

xml#CI_DateTypeCode"
                                codeListValue="revision"/>
                                </gmd:dateType>
                                </gmd:CI_Date>
        </gmd:date>
        </gmd:CI_Citation>
    </gmd:specification>
    <gmd:explanation>
        <gco:CharacterString>
            ...
        </gco:CharacterString>
    </gmd:explanation>
    <gmd:pass>
        <gco:Boolean>0</gco:Boolean>
    </gmd:pass>
    </gmd:DQ_ConformanceResult>
</gmd:result>
    ...
</gmd:report>
    ...
</gmd:DQ_DataQuality>
</gmd:dataQualityInfo>

```

Conformance Specification

Name (Number)	specification (130) [UML]
Short Name	conSpec
Definition	citation of a product specification or user requirement against which data is being evaluated
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	CI_Citation <<DataType>>

Meaning & Purpose

Guidance

Example

Conformance Explanation

Name (Number)	explanation (131) [UML]
Short Name	conExpl
Definition	explanation of the meaning of conformance for this result
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Conformance Pass

Name (Number)	pass (132) [UML]
Short Name	conPass
Definition	indication of the conformance result where 0 = fail and 1 = pass
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Boolean
Domain	1 = yes, 0 = no

Meaning & Purpose

Guidance

Example

Data Quality Quantitative Result

Name (Number)	DQ_QuantitativeResult (133) [UML]
Short Name	QuanResult
Definition	the values or information about the value(s) (or set of values) obtained from applying a data quality measure
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (DQ_Result)
Domain	Lines 134-137

Meaning & Purpose

Guidance

Example

Value Type

Name (Number)	valueType (134) [UML]
Short Name	quanValType
Definition	value type for reporting a data quality result
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	RecordType <<Metaclass>> (B.4.3)

Meaning & Purpose

Guidance

Example

Quantitative Value Unit

Name (Number)	valueUnit (135) [UML]
Short Name	quanValUnit
Definition	value unit for reporting a data quality result
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	UnitOfMeasure (B.4.3)

Meaning & Purpose

Guidance

Example

Error Statistic

Name (Number)	errorStatistic (136) [UML]
Short Name	errStat
Definition	statistical method used to determine the value
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Character string
Domain	Free text

Meaning & Purpose

Guidance

Example

Quantitative Value

Name (Number)	value (137) [UML]
Short Name	quanVal
Definition	quantitative value or values, content determined by the evaluation procedure used
Obligation/ Condition	Mandatory
Maximum Occurrence	No maximum
Data Type	Class
Domain	Record

Meaning & Purpose

Guidance

Example

7.4. 5 Scope Information

Data Quality Scope

Name (Number)	DQ_Scope (138) [UML]
Short Name	DQScope
Definition	extent of characteristic(s) of the data for which quality information is reported
Obligation/ Condition	Use obligation for referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class << Data Type >>
Domain	Lines 139-141

Meaning & Purpose

Guidance

Example

Scope Level

Name (Number)	level (139) [UML]
Short Name	scpLvl
Definition	hierarchical level of the data specified by the scope
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	MD_ScopeCode <<CodeList>>

Meaning & Purpose

Guidance

Example

Scope Extent

Name (Number)	extent (140) [UML]
Short Name	scpExt
Definition	information about the horizontal, vertical and temporal extent of the data specified by the scope
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	EX_Extent <<DataType>>

Meaning & Purpose

Guidance

Example

levelDescription

Name (Number)	levelDescription (141) [UML]
Short Name	scpLvDesc
Definition	detailed description about the level of the data specified by the scope
Obligation/ Condition	Conditional: mandatory if level not equal "dataset" or "series"
Maximum Occurrence	No maximum
Data Type	Class
Domain	MD_ScopeDescription <<Union>>

Meaning & Purpose

Guidance

Example

7.5 Maintenance Information

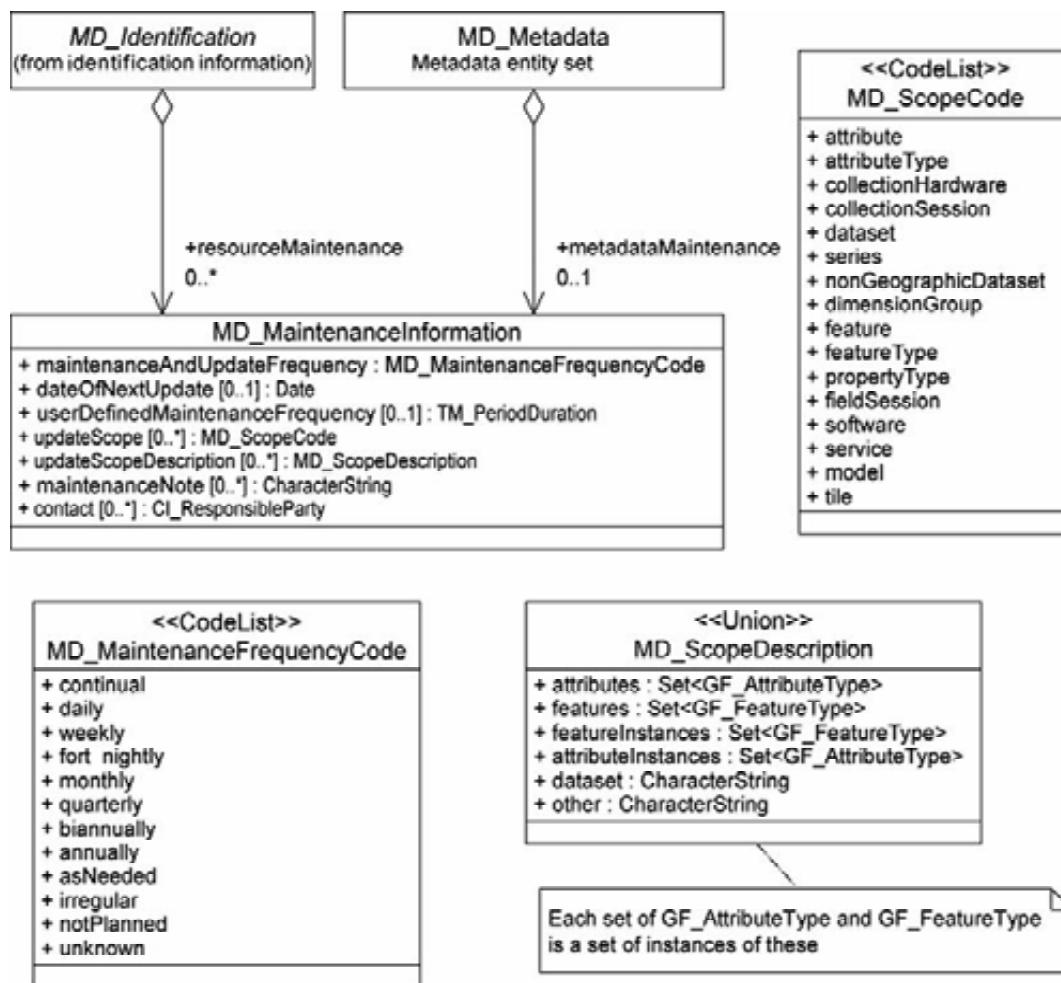


Fig 10. Maintenance information

(Source : ISO 19115:2003/Cor 1:2006, Figure A.7 Maintenance information)

7.5.1 General

Maintenance Information

Name (Number)	MD_MaintenanceInformation (142) [UML]
Short Name	MaintInfo
Definition	information about the scope and frequency of updating
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Metadata and MD_Identification)
Domain	Lines 143 -148.1

Meaning & Purpose

Guidance

Example

Maintenance Frequency

Name (Number)	maintenanceAndUpdateFrequency (143) [UML]
Short Name	maintFreq
Definition	frequency with which changes and additions are made to the resource after the initial resource is completed
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	MD_MaintenanceFrequencyCode <<CodeList>>

Meaning & Purpose This element provides the frequency with which changes and additions are made to the resource after the initial resource is completed. Values for this element are selected from a code list.

Guidance Choose an appropriate term from the MD_MaintenanceFrequencyCode codelist {see section 6.16.17}; for example, 'weekly'.

Example

Explanation	The following XML example shows where there are no plans to update the resource
Value	notPlanned
XML	<pre> ... <gmd:MD_MaintenanceInformation> <gmd:maintenanceAndUpdateFrequency> <gmd:MD_MaintenanceFrequencyCode codeList="http://asdd.ga.gov.au/asdd/profileinfo/gmxCodelists .xml#MD_MaintenanceFrequencyCode" codeListValue="notPlanned" /> </gmd:maintenanceAndUpdateFrequency> ... </gmd:MD_MaintenanceInformation> ... </pre>

Date of Next Update

Name (Number)	dateOfNextUpdate (144) UML
Short Name	dateNext
Definition	scheduled revision date for resource
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	Date

Meaning & Purpose

Guidance

Example

User Defined Maintenance Frequency

Name (Number)	userDefinedMaintenanceFrequency (145) [UML]
Short Name	usrDefFreq
Definition	maintenance period other than those defined
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	TM PeriodDuration

Meaning & Purpose

Guidance

Example

Maintenance Update Scope

Name (Number)	updateScope (146) [UML]
Short Name	maintScp
Definition	scope of data to which maintenance is applied
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	MD ScopeCode <<Codelist>>

Meaning & Purpose

Guidance

Example

Update Scope Description

Name (Number)	updateScopeDescription (147) [UML]
Short Name	upScpDesc
Definition	additional information about the range or extent of the resource
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	MD_ScopeDescription <<Union>>

Meaning & Purpose

Guidance

Example

Maintenance Note

Name (Number)	maintenanceNote (148) [UML]
Short Name	maintNote
Definition	information regarding specific requirements for maintaining the resource
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Maintenance Contact

Name (Number)	contact (148.1) [UML]
Short Name	maintCont
Definition	identification of, and means of communicating with, person(s) and organization(s) with responsibility for maintaining the metadata
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	CI_ResonsibleParty <<DataType>>

Meaning & Purpose

Guidance

Example

7.5. 2 Scope Description Information

Metadata Scope Description

Name (Number)	MD_ScopeDescription (149) [UML]
Short Name	ScpDesc
Definition	description of the class of information covered by the information
Obligation/Condition	Use obligation from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class <<Union>>
Domain	Lines 150-155

Meaning & Purpose

Guidance

Example

Attribute Set

Name (Number)	attributes (150) [UML]
Short Name	attribSet
Definition	instances of attribute types to which the information applies
Obligation/ Condition	Conditional: Mandatory if features , featureInstances , attributeInstances , dataset and other not documented.
Maximum Occurrence	1
Data Type	Set (B.4.7)
Domain	GF_AttributeType (B.4.4)

Meaning & Purpose

Guidance

Example

Feature Set

Name (Number)	features (151) [UML]
Short Name	featSet
Definition	instances of feature types to which the information applies
Obligation/ Condition	Conditional: Mandatory if attributes , featureInstances , attributeInstances , dataset and other not documented.
Maximum Occurrence	1
Data Type	Set (B.4.7)
Domain	GF_FeatureType (B.4.4)

Meaning & Purpose

Guidance

Example

Feature Instance Set

Name (Number)	featureInstances (152) [UML]
Short Name	featIntSet
Definition	feature instances to which the information applies
Obligation/Condition	Conditional: Mandatory if attributes , features , attributeInstances , dataset and other not documented.
Maximum Occurrence	1
Data Type	Set (B.4.7)
Domain	GF_FeatureType (B.4.4)

Meaning & Purpose

Guidance

Example

Attribute Instance Set

Name (Number)	attributeInstances (153) [UML]
Short Name	attribIntSet
Definition	attribute instances to which the information applies
Obligation/Condition	Conditional: Mandatory if attributes , features , featureInstances , dataset and other not documented.
Maximum Occurrence	1
Data Type	Set (B.4.7)
Domain	GF_AttributeType (B.4.4)

Meaning & Purpose

Guidance

Example

Dataset Set

Name (Number)	dataset (154) [UML]
Short Name	datasetSet
Definition	dataset to which the information applies
Obligation/ Condition	Conditional: Mandatory if attributes , features , featureInstances , attributeInstances , and other not documented?
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Other

Name (Number)	other (155) [UML]
Short Name	other
Definition	class of information that does not fall into the other categories to which the information applies
Obligation/ Condition	Conditional: Mandatory if attributes , features , featureInstances , attributeInstances , and dataset not documented.
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

7.6 Spatial Representation Information (includes grid and vector representation)

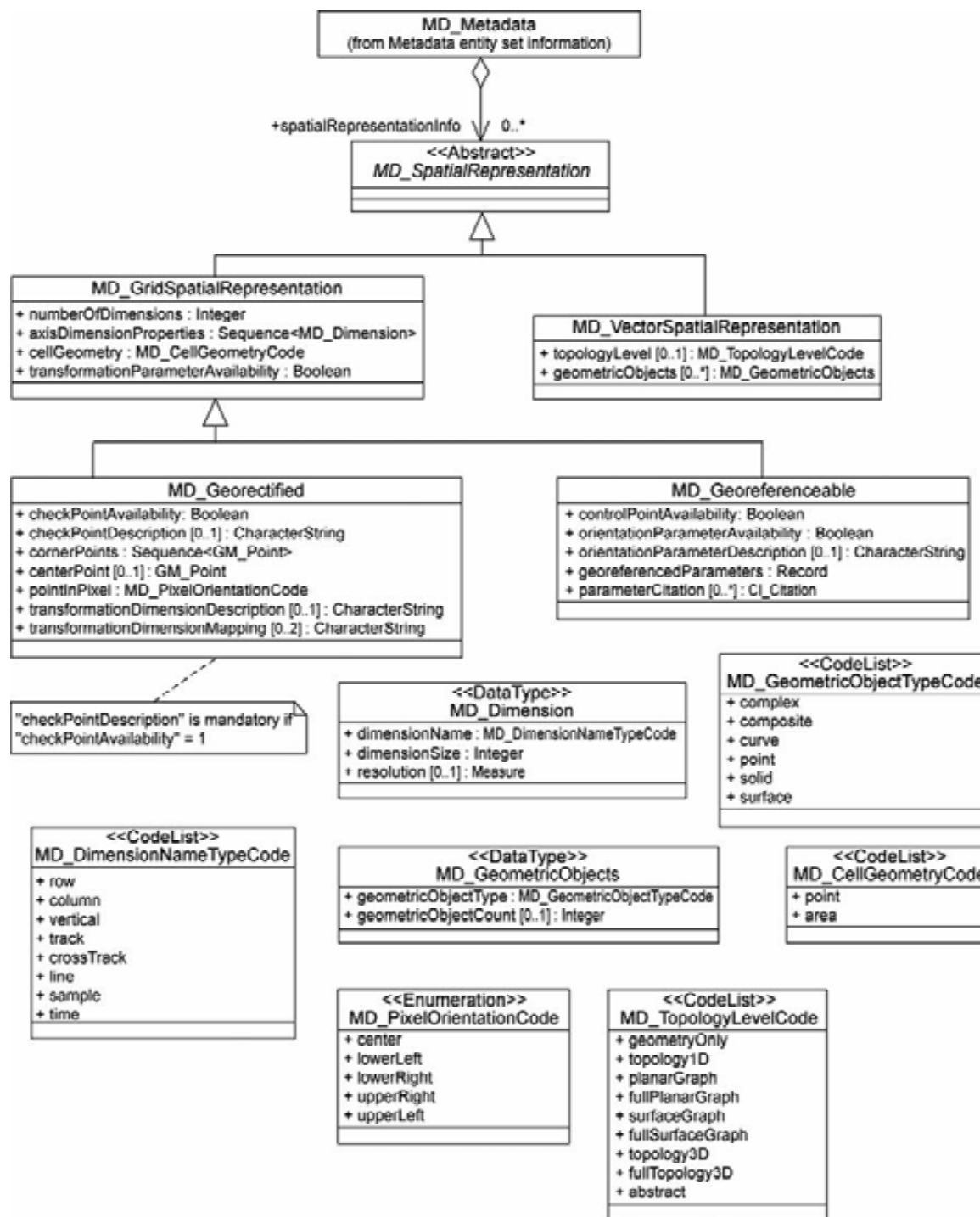


Fig 11. Spatial representation information

(Source : ISO 19115:2003/Cor 1:2006, Figure A.8 Spatial representation information)

7.6.1 General

Spatial Representation

Name (Number)	MD_SpatialRepresentation (156) UML
Short Name	SpatRep
Definition	digital mechanism used to represent spatial information
Obligation/Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Metadata) << Abstract >>
Domain	

Meaning & Purpose

The Spatial Representation package contains information concerning the mechanisms used to represent spatial information in a dataset.

This may include information related to the vector or raster data types, how the dataset has been spatial related (eg: georeferenced). How the spatial objects relate to each other and the number of objects (eg: points, lines, polygons, rows and columns). The MD_SpatialRepresentation entity is optional, and use is dependent upon the presence of the referencing objects below.

Guidance

Must not be instantiated because this class is <<[Abstract](#)>>.

The metadata content creator is not required to record any information against this element.

MD_SpatialRepresentation must be replaced by one of [MD_GridSpatialRepresentation](#), [MD_VectorSpatialRepresentation](#), [MD_Georectified](#) or [MD_Georeferenceable](#) elements.

Metadata for Spatial data representation are derived from ISO 19107, 19103.

Grid Spatial Representation

Name (Number)	MD_GridSpatialRepresentation (157) [UML]
Short Name	GridSpatRep
Definition	information about grid spatial objects in the dataset
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (MD_SpatialRepresentation)
Domain	Lines 158-161

Meaning & Purpose MD_GridSpatialRepresentation is a container, like a heading, that identifies various details about the grid used to represent the resource. It contains information concerning how the raster / grid is structured.

Guidance This element contains no specific value in its own right.

The metadata content creator is not required to record any information against this element.

This element provides the structure for an instance of the class [MD_SpatialRepresentation](#).

This element contains the mandatory elements; numberOfDimensions; axisDimensionProperties; cellGeometry; and transformationParameterAvailability

Example

Explanation	The following XML example shows the use of MD_GridSpatialRepresentation in context.
Value	
XML	<pre> <gmd:MD_Metadata ...> ... <gmd:spatialRepresentationInfo> <gmd:MD_GridSpatialRepresentation id="gr2"> <gmd:numberOfDimensions> ... </gmd:numberOfDimensions> <gmd:axisDimensionProperties> ... </gmd:axisDimensionProperties> <gmd:cellGeometry> ... </gmd:cellGeometry> <gmd:transformationParameterAvailability> ... </gmd:transformationParameterAvailability> </gmd:MD_GridSpatialRepresentation> </gmd:spatialRepresentationInfo> ... </gmd:MD_Metadata> </pre>

Number of Dimensions

Name (Number)	numberOfDimensions (158) [UML]
Short Name	numDims
Definition	number of independent spatial-temporal axes
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Integer
Domain	Integer

Meaning & Purpose

Guidance

Example

Axis Dimension Properties

Name (Number)	axisDimensionProperties (159) [UML]
Short Name	axDimProps
Definition	information about spatial-temporal axis properties
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Sequence
Domain	MD_Dimension <<DataType>>

Meaning & Purpose

Guidance

Example

Cell Geometry

Name (Number)	cellGeometry (160) [UML]
Short Name	cellGeo
Definition	identification of grid data as point or cell
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	MD_CellGeometryCode <<CodeList>>

Meaning & Purpose

Guidance

Example

Transformation Parameter Availability

Name (Number)	transformationParameterAvailability (161) [UML]
Short Name	tranParaAv
Definition	indication of whether or not parameters for transformation between image coordinates and geographic or map coordinates exist (are available)
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Boolean
Domain	1 = yes 0 = no

Meaning & Purpose

Guidance

Example

Georectified

Name (Number)	MD_Georectified (162) [UML]
Short Name	Georect
Definition	grid whose cells are regularly spaced in a geographic (i.e. latitude /longitude) or map coordinate system defined in the Spatial Referencing System (SRS) so that any cell in the grid can be geolocated given its grid coordinate and the grid origin, cell spacing, and orientation
Obligation/Condition	Use obligation condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (MD_GridSpatialRepresentation)
Domain	Lines 163-169 and 158-161

Meaning & Purpose

Guidance

Example

Check Point Availability

Name (Number)	checkPointAvailability (163) [UML]
Short Name	chkPtAv
Definition	indication of whether or not geographic position points are available to test the accuracy of the georeferenced grid data
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Boolean
Domain	1 = yes 0 = no

Meaning & Purpose

Guidance

Example

Check Point Description

Name (Number)	checkPointDescription (164) [UML]
Short Name	chkPtDesc
Definition	description of geographic position points used to test the accuracy of the georeferenced grid data
Obligation/Condition	Conditional. "checkPointDescription" is mandatory if " checkPointAvailability " = 1
Maximum Occurrence	1
Data Type	Character string
Domain	Free text

Meaning & Purpose

Guidance

Example

Corner Points

Name (Number)	cornerPoints (165) [UML]
Short Name	cornerPts
Definition	earth location in the coordinate system defined by the Spatial Reference System and the grid coordinate of the cells at opposite ends of grid coverage along two diagonals in the grid spatial dimensions. There are four corner points in a georectified grid; at least two corner points along one diagonal are required. The first corner point corresponds to the origin of the grid.
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Sequence
Domain	GM_Point <<Type>>

Meaning & Purpose

Guidance

Example

Center Point

Name (Number)	centerPoint (166) [UML]
Short Name	centerPt
Definition	earth location in the coordinate system defined by the Spatial Reference System and the grid coordinate of the cell halfway between opposite ends of the grid in the spatial dimensions
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	GM_Point <<Type>> (B.4.6)

Meaning & Purpose

Guidance

Example

Point in Pixel

Name (Number)	pointInPixel (167) [UML]
Short Name	ptInPixel
Definition	Point in a pixel corresponding to the Earth location of the pixel
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	MD_PixelOrientationCode <<Enumeration>>

Meaning & Purpose

Guidance

Example

Transformation Dimension Description

Name (Number)	transformationDimensionDescription (168) [UML]
Short Name	transDimDesc
Definition	general description of the transformation
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Character String
Domain	Free Text

Meaning & Purpose

Guidance

Example

Transformation Dimension Mapping

Name (Number)	transformationDimensionMapping (169) [UML]
Short Name	transDimMap
Definition	information about which grid axes are the spatial (map) axes
Obligation/ Condition	Optional
Maximum Occurrence	2
Data Type	Character String
Domain	Free text

Meaning & Purpose

Guidance

Example

Georeferenceable

Name (Number)	MD_Georeferenceable (170) [UML]
Short Name	Georef
Definition	grid with cells irregularly spaced in any given geographic/map projection coordinate system, whose individual cells can be geolocated using geolocation information supplied with the data but cannot be geolocated from the grid properties alone
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified class (MD_GridSpatialRepresentation)
Domain	Lines 171-175 and 158-161

Meaning & Purpose

Guidance

Example

Control Point Availability

Name (Number)	controlPointAvailability (171) [UML]
Short Name	ctrlPtAv
Definition	indication of whether control point(s) exists
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Boolean
Domain	1 = yes, 0 = no

Meaning & Purpose

Guidance

Example

Orientation Parameter Availability

Name (Number)	orientationParameterAvailability (172) [UML]
Short Name	orieParaAv
Definition	indication of whether or not orientation parameters are available
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Boolean
Domain	1 = yes, 0 = no

Meaning & Purpose

Guidance

Example

Orientation Parameter Description

Name (Number)	orientationParameterDescription (173) [UML]
Short Name	orieParaDs
Definition	description of the parameters used to describe sensor orientation
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Georeferenced Parameters

Name (Number)	georeferencedParameters (174) [UML]
Short Name	georefPars
Definition	terms which support grid data georeferencing
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	Record (B.4.3)

Meaning & Purpose

Guidance

Example

Parameter Citation

Name (Number)	parameterCitation (175) [UML]
Short Name	paraCit
Definition	reference providing description of the parameters
Obligation/Condition	Optional
Maximum Occurrence	No Maximum
Data Type	Class
Domain	CI_Citation << DataType >> (B.3.2)

Meaning & Purpose

Guidance

Example

Metadata Vector Spatial Representation

Name (Number)	MD_VectorSpatialRepresentation (176) [UML]
Short Name	VectSpatRep
Definition	Information about the spatial representation of vector spatial objects in a dataset
Obligation/Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified class (MD_SpatialRepresentation)
Domain	Lines 177-178

Meaning & Purpose MD_VectorSpatialRepresentation is a container, like a heading, for elements that identify various details about how the resource is represented by vectors.

Contains information concerning the vector structures and their relationships.

Guidance This element contains no specific value in its own right.

The metadata content creator is not required to record any information against this element.

This element provides the structure for an instance of the class [MD_SpatialRepresentation](#).

This element contains the optional elements; [topologyLevel](#) and [geometricObjects](#)

Example

Explanation	The following XML example shows the use of MD_VectorSpatialRepresentation in context .
Value	
XML	<pre> <gmd:MD_Metadata ...> ... <gmd:spatialRepresentationInfo> <gmd:MD_VectorSpatialRepresentation> ... </gmd:MD_VectorSpatialRepresentation> </gmd:spatialRepresentationInfo> ... </gmd:MD_Metadata> </pre>

Topology Level

Name (Number)	topologyLevel (177) [UML]
Short Name	topLvl
Definition	code which identifies the degree of complexity of the spatial relationships
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	MD_TopologyLevelCode <<CodeList>> (B.5.28)

Meaning & Purpose

Guidance

Example

Geometric Objects

Name (Number)	geometricObjects (178) [UML]
Short Name	geometricObjects
Definition	information about the geometric objects used in the dataset
Obligation/ Condition	Optional
Maximum Occurrence	No Maximum
Data Type	Class
Domain	MD_GeometricObjects <<DataType>> (B.2.6.3)

Meaning & Purpose geometricObjects is a container, like a heading, for other elements that describe the type and number of objects in a vector dataset.

Guidance This element contains no specific value in its own right.

 This element provides the structure for an instance of the class MD_GeometricObjects.

 The metadata content creator is not required to record any information against this element

Example

Explanation	The following XML example shows the use of geometricObjects in context
Value	
XML	<pre> <gmd:MD_Metadata ...> ... <gmd:spatialRepresentationInfo> <gmd:MD_VectorSpatialRepresentation> ... <gmd:geometricObjects> <gmd:MD_GeometricObjects> ... </gmd:MD_GeometricObjects> </gmd:geometricObjects> </gmd:MD_VectorSpatialRepresentation> </gmd:spatialRepresentationInfo> ... </gmd:MD_Metadata> </pre>

7.6.2 Dimension Information

Dimension

Name (Number)	MD_Dimension (179) [UML]
Short Name	Dimen
Definition	axis properties
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class << DataType >>
Domain	Lines 180-182

Meaning & Purpose

Guidance

Example

Dimension Name

Name (Number)	dimensionName (180) [UML]
Short Name	dimName
Definition	name of the axis
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	MD Dimension Name Type Code <<CodeList>>

Meaning & Purpose

Guidance

Example

Dimension Size

Name (Number)	dimensionSize (181) [UML]
Short Name	dimSize
Definition	number of elements along the axis
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Integer
Domain	Integer

Meaning & Purpose

Guidance

Example

Resolution

Name (Number)	resolution (182) [UML]
Short Name	dimResol
Definition	degree of detail in the grid dataset
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	Measure (B.4.3)

Meaning & Purpose

Guidance

Example

7.6.3 Geometric Object Information

Geometric Objects

Name (Number)	MD_GeometricObjects (183) [UML]
Short Name	GeometObjs
Definition	number of objects, listed by geometric object type, used in the dataset
Obligation/Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class << DataType >>
Domain	Lines 184-185

Meaning & Purpose	<p>MD_GeometricObjects is a container, like a heading, that identifies details about the geometry of the vectors in the resource.</p> <p>It contains information concerning the number of vectors and their type.</p>
Guidance	<p>MD_GeometricObjects contains no specific value in its own right.</p> <p>It provides the structure for an instance of geometricObjects.</p> <p>It contains the mandatory element geometricObjectType and the optional element geometricObjectCount</p> <p>The metadata content creator is not required to record any information against this element.</p>

Example

Explanation	The following XML example shows the use of MD_GeometricObjects in context.
Value	
XML	<pre> <gmd:MD_Metadata ...> ... <gmd:spatialRepresentationInfo> <gmd:MD_VectorSpatialRepresentation> ... <gmd:geometricObjects> <gmd:MD_GeometricObjects> <gmd:geometricObjectType> ... </gmd:geometricObjectType> ... </gmd:MD_GeometricObjects> </gmd:geometricObjects> </gmd:MD_VectorSpatialRepresentation> </gmd:spatialRepresentationInfo> ... </gmd:MD_Metadata> </pre>

Geometric Object Type

Name (Number)	geometricObjectType (184) [UML]
Short Name	geoObjTyp
Definition	name of point or vector objects used to locate zero-, one-, two-, or three-dimensional spatial locations in the dataset
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	MD_GeometricObjectTypeCode <<Codelist>>

Meaning & Purpose geometricObjectType is a container, like a heading, that describes the type of geometric object(s) that make up the resource.

Guidance This element contains no specific value in its own right.

 This element provides the structure for an instance of MD_GeometricObjectTypeCode.

 The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows the use of geometricObjectType in context. This example shows the geometric objects are lines thus codeListValue="curve"
Value	
XML	<pre> <gmd:MD_Metadata ...> ... <gmd:spatialRepresentationInfo> <gmd:MD_VectorSpatialRepresentation> ... <gmd:geometricObjects> <gmd:MD_GeometricObjects> <gmd:geometricObjectType> <gmd:MD_GeometricObjectTypeCode codeList="http://asdd.ga.gov.au/asdd/profileinfo/gmxCodelists.xml#MD_Geometric ObjectTypeCode" codeListValue="curve">Curve </gmd:MD_GeometricObjectTypeCode> </gmd:geometricObjectType> ... </gmd:MD_GeometricObjects> </gmd:geometricObjects> </gmd:MD_VectorSpatialRepresentation> </gmd:spatialRepresentationInfo> ... </gmd:MD_Metadata> </pre>

Geometric Object Count

Name (Number)	geometricObjectCount (185) [UML]
Short Name	geoObjCnt
Definition	total number of the point or vector object type occurring in the dataset
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Integer
Domain	> 0

Meaning & Purpose This element is a count of the number of objects, of geometric object type, that are in the resource.

Guidance Some software packages may automatically populate this field.

Example

See Geometric Objects above, where the Geometric Object Count = 1000

Explanation	The following XML example shows the use of geometricObjectCount in context. This example shows that there are 1000 vectors in the resource.
Value	1000
XML	<pre> <gmd:MD_Metadata ...> ... <gmd:spatialRepresentationInfo> <gmd:MD_VectorSpatialRepresentation> ... <gmd:geometricObjects> <gmd:MD_GeometricObjects> <gmd:geometricObjectType> ... </gmd:geometricObjectType> <gmd:geometricObjectCount> <gco:Integer>1000</gco:Integer> </gmd:geometricObjectCount> </gmd:MD_GeometricObjects> </gmd:geometricObjects> </gmd:MD_VectorSpatialRepresentation> </gmd:spatialRepresentationInfo> ... </gmd:MD_Metadata> </pre>

7.7 Reference System Information (includes temporal, coordinate and geographic identifiers)

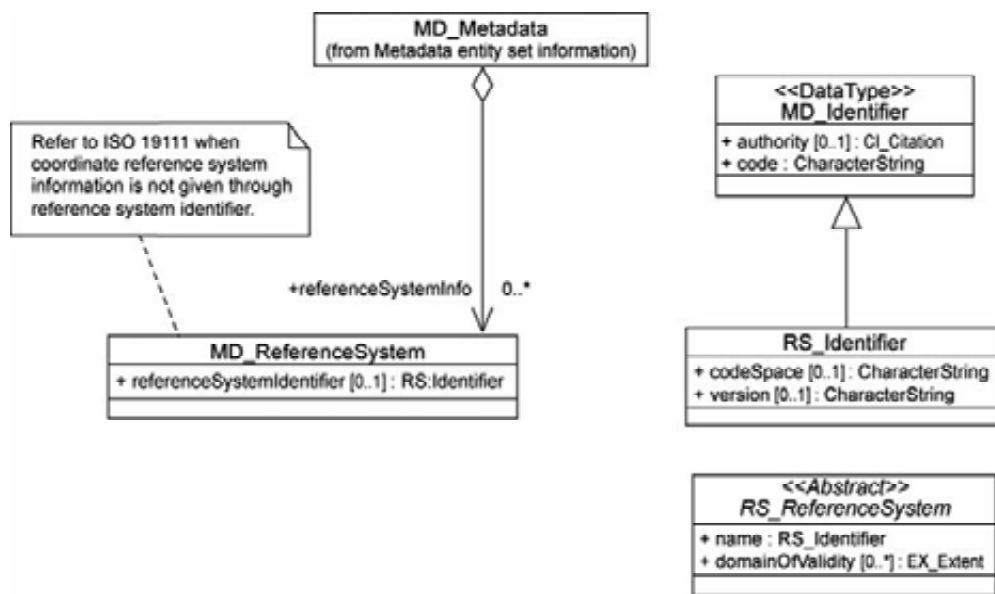


Fig 12. Reference system information

(Source : ISO 19115:2003/Cor 1:2006, Figure A.9 Reference system information)

7.7.1 General

Reference System

Name (Number)	MD_ReferenceSystem (186) UML
Short Name	RefSystem
Definition	information about the reference system
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Metadata)
Domain	Line 187

Meaning & Purpose MD_ReferenceSystem is a container, like a heading, for other elements that identify the reference system used when linking the resource to the object being described e.g. a dataset point to the location of a bore hole; a sample on a microscope slide; CRS, projection, datum.

Guidance MD_ReferenceSystem contains no specific value in its own right.

It provides the structure for an instance of [referenceSystemInfo](#) or [sourceReferenceSystem](#).

It contains the optional element [referenceSystemIdentifier](#).

The metadata content creator is not required to record any information against this element.

Example 1

Explanation	The following XML example shows the reference system of the resource
Value	
XML	<pre> <gmd:referenceSystemInfo> <gmd:MD_ReferenceSystem> <gmd:referenceSystemIdentifier> <gmd:RS_Identifier> ... </gmd:RS_Identifier> </gmd:referenceSystemIdentifier> </gmd:MD_ReferenceSystem> </gmd:referenceSystemInfo> </pre>

Example 2

Explanation	The following XML example shows the reference system of the source dataset. Used with describing the lineage of a dataset under the element <code><gmd:LI_Source></code> in <code><gmd:lineage></code> .
Value	
XML	<pre> <gmd:MD_Metadata> ... <gmd:dataQualityInfo> <gmd:DQ_DataQuality> ... <gmd:lineage> ... <gmd:LI_Source> ... <gmd:sourceReferenceSystem> <gmd:MD_ReferenceSystem> ... </gmd:MD_ReferenceSystem> </gmd:sourceReferenceSystem> ... </gmd:LI_Source> ... </gmd:lineage> </gmd:DQ_DataQuality> </gmd:dataQualityInfo> ... </gmd:MD_Metadata> </pre>

Reference System Identifier

Name (Number)	referenceSystemIdentifier (187) [UML]
Short Name	refSysId
Definition	name of reference system
Obligation/Condition	Conditional: Refer to SC_CRS in ISO 19111 when coordinate reference system information is not given through reference system identifier.
Maximum Occurrence	1
Data Type	Class
Domain	RS_Identifier

Meaning & Purpose referenceSystemIdentifier is a container, like a heading, for elements that identify the reference system used when generating the resource, allowing it to be aligned in time and space.

It provides the structure for an instance of [RS_Identifier \(208\)](#).

Guidance referenceSystemIdentifier contains no specific value in its own right. Include [RS_Identifier](#) in this element.

The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows the use of referenceSystemIdentifier in context.
Value	
XML	<pre> ... <gmd:MD_ReferenceSystem> <gmd:referenceSystemIdentifier> <gmd:RS_Identifier> ... </gmd:RS_Identifier> </gmd:referenceSystemIdentifier> </gmd:MD_ReferenceSystem> ... </pre>

Reference System

Name (Number)	RS_ReferenceSystem (195) [UML]
Short Name	RefSys
Definition	description of the spatial and temporal reference systems used in the dataset
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class << Abstract >>
Domain	Lines 196-197

Meaning & Purpose

Guidance

Example

Reference System Name

Name (Number)	name (196) [UML]
Short Name	refSysName
Definition	name of the reference system used
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	RS_Identifier

Meaning & Purpose

Guidance

Example

Domain of Validity

Name (Number)	domainOfValidity (197) [UML]
Short Name	domOValid
Definition	range which is valid for the reference system
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	EX_Extent << DataType >>

Meaning & Purpose

Guidance

Example

7.7.2 Identifier Information

Metadata Identifier

Name (Number)	<<DataType>> MD_Identifier (205) UML
Short Name	MdIdent
Definition	value uniquely identifying an object within a namespace
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class
Domain	Lines 206–207

Meaning & Purpose Exists to support its children elements and does not contain values in its own right. The identifier enables accurate identification of specific objects using a code. This is used in many areas including citations and geographic extent names.

Guidance This contains no specific value in its own right.

 The metadata content creator is not required to record any information against this element.

Example 1

Explanation	The following XML example shows the use of MD_Identifier in context of geographicIdentifier .
Value	
XML	<pre> ... <gmd:geographicElement> <gmd:EX_GeographicDescription> ... <gmd:geographicIdentifier> <gmd:MD_Identifier> ... </gmd:MD_Identifier> </gmd:geographicIdentifier> </gmd:EX_GeographicDescription> </gmd:geographicElement> ... </pre>

Example 2

Explanation	The following XML example shows the use of MD_Identifier in context of CI_Citation .
Value	
XML	<pre> <gmd:CI_Citation> ... <gmd:identifier> <gmd:MD_Identifier> ... </gmd:MD_Identifier> </gmd:identifier> ... </gmd:CI_Citation> </pre>

Identifier Authority

Name (Number)	authority (206) UML
Short Name	identAuth
Definition	person or party responsible for maintenance of the namespace
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	CI_Citation <<DataType>>

Meaning & Purpose The element “authority” is a container, like a heading, for a citation of the authority that maintains or is responsible for the identification code e.g. reference system code.

It provides the structure for an instance of [CI_Citation \(359\)](#).

Guidance ‘authority’ contains no specific value in its own right.

Include [CI_Citation](#) in this element.

The metadata content creator is not required to record any information against this element.

Example 1

Explanation	The following XML example shows the use of authority in context of MD_Identifier.
Value	
XML	<pre> <gmd:MD_Metadata ...>_ ... <gmd:MD_Identifier> <gmd:authority> <gmd:CI_Citation> <gmd:title> <gco:CharacterString>ANZLIC - Geographic Extent Name Register - Australia </gco:CharacterString> </gmd:title> <gmd:date> ... </gmd:date> ... <!-- refer to xml example at appendix--> <gmd:identifier> <gmd:MD_Identifier> <gmd:code> <gco:CharacterString> http://www.anzlic.org.au/.../anzli c-allgens.xml#anzlic-australia </gco:CharacterString> </gmd:code> </gmd:MD_Identifier> </gmd:identifier> ... <!-- refer to xml example at appendix--> </gmd:CI_Citation> </gmd:authority> ... </gmd:MD_Identifier> ... </gmd:MD_Metadata> </pre>

Example 2

Explanation	The following XML example shows the use of authority in context of RS_Identifier.
Value	
XML	<pre> <gmd:MD_Metadata ...>_ ... <gmd:RS_Identifier> <gmd:authority> <gmd:CI_Citation> <gmd:title> <gco:CharacterString>EPSG Geodetic Parameter Dataset</gco:CharacterString> </gmd:title> <gmd:date> ... </gmd:date> ... </gmd:CI_Citation> </gmd:authority> <gmd:code> <gco:CharacterString>EPSG:4978</gco:CharacterString> </gmd:code> ... </gmd:RS_Identifier> ... </gmd:MD_Metadata> </pre>

Identifier Code

Name (Number)	code (207) UML
Short Name	identCode
Definition	alphanumeric value identifying an instance in the namespace
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose	The identifier code allows for the unambiguous identification of a code instance from a structured system.
Guidance	Instances of code occur in different circumstances, each requiring their own type of code. Where there are no published and/or authoritative namespaces, care should be taken that the values are well accepted by a community of interest.
Example	

NZMG	New Zealand Map Grid [projection]
NZGD49	New Zealand Geodetic Datum 1949 [datum]

Explanation	XML
Value	Australian Exclusive Economic Zone
XML	<pre> <gmd:MD_Identifier> ... <gmd:code> <gco:CharacterString>AUSTRALIAN Exclusive Economic Zone</gco:CharacterString> </gmd:code> </gmd:MD_Identifier> </pre>

Reference System Identifier

Name (Number)	RS_Identifier (208) [UML]
Short Name	RsIdent
Definition	identifier used for reference systems
Obligation/Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (MD Identifier)
Domain	Lines 206-207 and 208.1-208.2

Meaning & Purpose	The element RS_Identifier is a container, like a heading, for the elements that define a reference system in terms of the code, its authority and the code-space it comes from.
Guidance	<p>RS_Identifier contains no specific value in its own right.</p> <p>It provides the structure for an instance of referenceSystemIdentifier ()</p> <p>Include the mandatory element code and preferably at least one of authority and codeSpace.</p> <p>The metadata content creator is not required to record any information against this element.</p>

The reference system identifier should only be used in MD_ReferenceSystem/referenceSystemIdentifier; even though the schemas allow this element to replace MD_Identifier (e.g. EX_GeographicDescription/geographicIdentifier).

The International Association of Oil & Gas producers (OGP) Surveying and Positioning Committee includes the European Petroleum and Survey Group (EPSG) manages a global list of commonly used coordinate reference systems (CRS). The EPSG CRS codes are available at <http://www.epsg.org/> and should be used wherever possible. If an applicable CRS cannot be found then consider applying to the EPSG for a suitable CRS to be added.

The default CRS for Catalogue Services – Web (CSW) is WGS84. The EPSG CRS code for this is 32662.

Refer to 6.17 for other EPSG codes.

The EPSG CRS codes commonly used in Australia and NZ are described in the table below. The three types of Coordinate Reference Systems (CRS) identified in this table have the following characteristics:

Geocentric	3 dimensional - X (metre), Y (metre) and Z (metre)
Geographic 2D	2 dimensional - latitude (degree) and longitude (degree)
Geographic 3D	3 dimensional - latitude (degree), longitude (degree) and height (metre)

The elements that make up RS_Identifier contain the code of the reference system and the authority who created the reference system codes. ANZLIC recommends the use of **EPSG codes** within the RS_Identifier class.

Table 1. List of EPSG codes commonly used in Australia and New Zealand

Example 1

Explanation	The EPSG code number for WGS 84 / Plate Carree
Value	32662
XML	<pre> <gmd:referenceSystemInfo> <gmd:MD_ReferenceSystem> <gmd:referenceSystemIdentifier> <gmd:RS_Identifier> <gmd:authority> <gmd:CI_Citation> <gmd:title> <gco:CharacterString>EPSG Geodetic Parameter Dataset </gco:CharacterString> </gmd:title> <gmd:date> <gmd:CI_Date> <gmd:date> <gco:Date>2009</gco:Date> </gmd:date> <gmd:dateType> <gmd:CI_DateTypeCode codeList= http://asdd.ga.gov.au/asdd/pr ofileinfo/gmxCodelists.xml#CI _DateTypeCode codeListValue="revision"/> </gmd:dateType> </gmd:CI_Date> </gmd:date> <gmd:edition> <gco:CharacterString>Version 6.13</gco:CharacterString> </gmd:edition> </gmd:CI_Citation> </gmd:authority> <gmd:code> <gco:CharacterString>EPSG: 32662 </gco:CharacterString> </gmd:code> </gmd:RS_Identifier> </gmd:referenceSystemIdentifier> </gmd:MD_ReferenceSystem> </gmd:referenceSystemInfo> </pre>

Example 2

Explanation	The following XML example shows the use of the EPSG code number for the Australian Height Datum
Value	5711
XML	<pre> <gmd:referenceSystemInfo> <gmd:MD_ReferenceSystem> <gmd:referenceSystemIdentifier> <gmd:RS_Identifier> <gmd:code> <gco:CharacterString>EPSG: 5711 </gco:CharacterString> </gmd:code> </gmd:RS_Identifier> </gmd:referenceSystemIdentifier> </gmd:MD_ReferenceSystem> </gmd:referenceSystemInfo> </pre>

Example 3

Explanation	The following XML example shows the use of the EPSG code numbers for GDA94 and the Australian Height Datum
Value	2383 and 5711
XML	<pre> <gmd:referenceSystemInfo> <gmd:MD_ReferenceSystem> <gmd:referenceSystemIdentifier> <gmd:RS_Identifier> <gmd:authority> <gmd:CI_Citation> <gmd:title> <gco:CharacterString>EPSG Geodetic Parameter Dataset </gco:CharacterString> </gmd:title> <gmd:date> <gmd:CI_Date> <gmd:date> <gco>Date>2009</gco>Date> </gmd:date> <gmd:dateType> <gmd:CI_DateTypeCode codeList="http://asdd.ga.gov.a u/asdd/profileinfo/gmxCodelist s.xml#CI_DateTypeCode" codeListValue="revision" /> </gmd:dateType> </gmd:CI_Date> </gmd:date> </gmd:CI_Citation> </gmd:authority> <gmd:code> <gco:CharacterString>EPSG:2383 </gco:CharacterString> </gmd:code> ... </gmd:RS_Identifier> ... </gmd:referenceSystemIdentifier> </gmd:MD_ReferenceSystem> </gmd:referenceSystemInfo> <gmd:referenceSystemInfo> <gmd:MD_ReferenceSystem> <gmd:referenceSystemIdentifier> <gmd:RS_Identifier> <gmd:code> <gco:CharacterString>EPSG:5711 </gco:CharacterString> </gmd:code> <gmd:codeSpace> <gco:CharacterString>urn:ogc:def:datum:EPSG::</gco:Characte rString> </gmd:codeSpace> </gmd:RS_Identifier> </gmd:referenceSystemIdentifier> </gmd:MD_ReferenceSystem> </gmd:referenceSystemInfo> </pre>

Example 4

Explanation	The following XML example shows the use of the EPSG code number for the Geocentric Datum of Australia 1994
Value	4938
XML	<pre> <gmd:referenceSystemInfo> <gmd:MD_ReferenceSystem id="rs1"> <gmd:referenceSystemIdentifier> <gmd:RS_Identifier> <gmd:code> <!-- Geocentric Datum of Australia 1994 --> <gco:CharacterString>EPSG: : 4938 </gco:CharacterString> </gmd:code> <gmd:codeSpace> <gco:CharacterString>urn:ogc:def:datum:EPSG::</gco:CharacterStrin g> </gmd:codeSpace> </gmd:RS_Identifier> </gmd:referenceSystemIdentifier> </gmd:MD_ReferenceSystem> </gmd:referenceSystemInfo> </pre>

Identifier Code Space

Name (Number)	codeSpace (208.1) UML
Short Name	identCodeSpace
Definition	name or identifier of the person or organization responsible for namespace
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Identifier Version

Name (Number)	version (208.2) [UML]
Short Name	identVrsn
Definition	version identifier for the namespace
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

7.8 Content Information (includes Feature catalogue and Coverage descriptions)

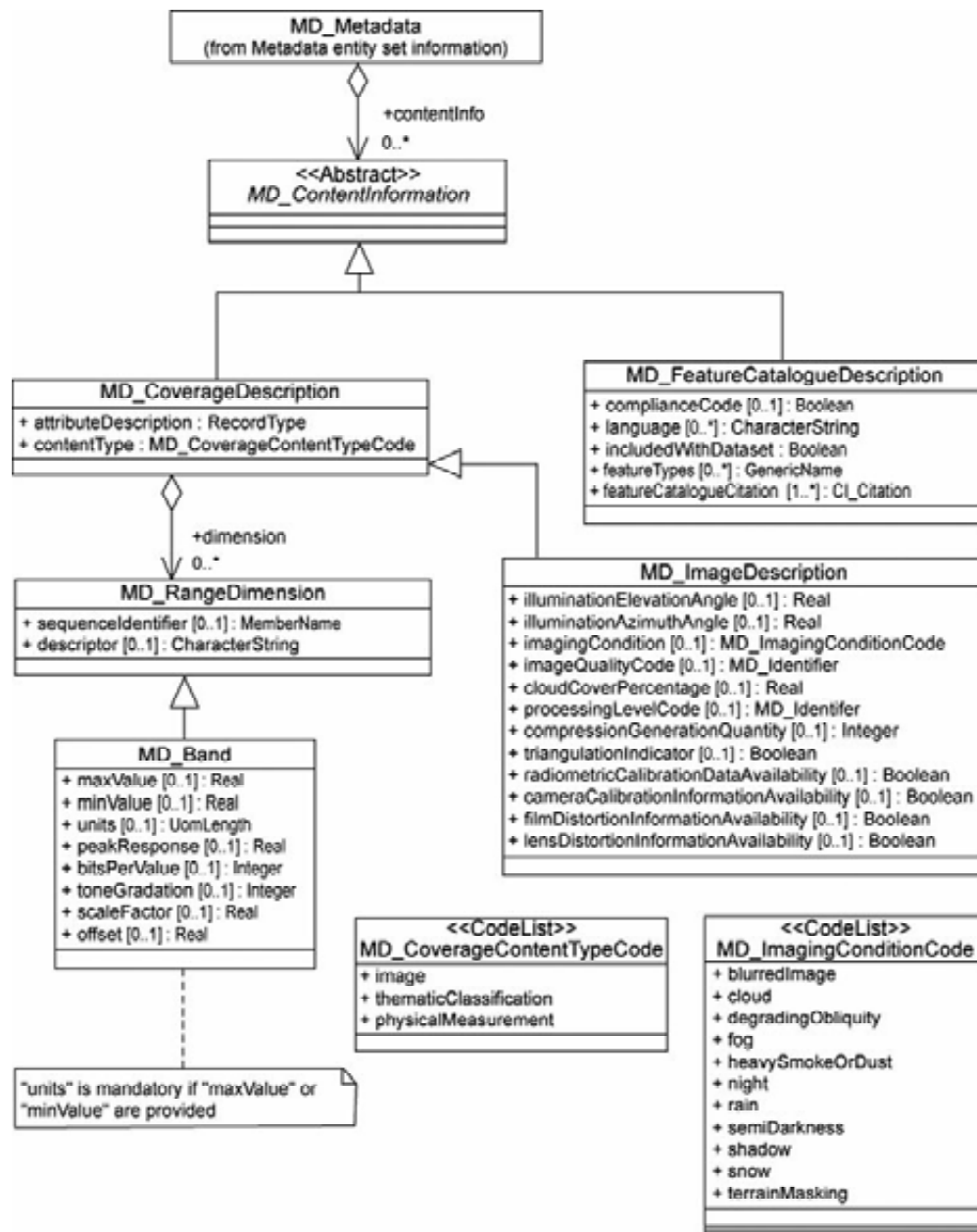


Fig 13. Content information

(Source : ISO 19115:2003/Cor 1:2006, Figure A.10 Content information)

7.8.1 General

Content Information

Name (Number)	<i>MD_ContentInformation</i> (232) [UML]
Short Name	ContInfo
Definition	description of the content of a dataset
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Metadata) <<Abstract>>
Domain	

Meaning & Purpose

Guidance

Example

Feature Catalogue Description

Name (Number)	<i>MD_FeatureCatalogueDescription</i> (233) [UML]
Short Name	FetCatDesc
Definition	information identifying the feature catalogue or the conceptual schema
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence of referencing object
Data Type	Specified Class (MD_ContentInformation)
Domain	Lines 234-238

Meaning & Purpose

Guidance

Example

Compliance Code

Name (Number)	complianceCode (234) [UML]
Short Name	compCode
Definition	indication of whether or not the cited feature catalogue complies with ISO 19110
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Boolean
Domain	0-not compliant 1-compliant

Meaning & Purpose

Guidance

Example

Catalogue Language

Name (Number)	language (235) [UML]
Short Name	catLang
Definition	language(s) used within the catalogue
Obligation/ Condition	Optional
Maximum Occurrence	No Maximum
Data Type	Character string
Domain	ISO 639-2 , other parts can be used

Meaning & Purpose

Guidance

Example

Included with Dataset

Name (Number)	includedWithDataset (236) [UML]
Short Name	incWithDS
Definition	indication of whether or not the feature catalogue is included with the dataset
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Boolean
Domain	0=no, 1=yes

Meaning & Purpose

Guidance

Example

Catalogue FeatureTypes

Name (Number)	featureTypes (237) [UML]
Short Name	catFetTypes
Definition	subset of feature types from cited feature catalogue occurring in dataset
Obligation/ Condition	Optional
Maximum Occurrence	No Maximum
Data Type	Class
Domain	Generic Name (B.4.8)

Meaning & Purpose

Guidance

Example

Catalogue Citation

Name (Number)	featureCatalogueCitation (238) [UML]
Short Name	catCitation
Definition	complete bibliographic reference to one or more external feature catalogues
Obligation/ Condition	Mandatory
Maximum Occurrence	No maximum
Data Type	Class
Domain	CI_Citation <<DataType>>

Meaning & Purpose

Guidance

Example

Coverage Description

Name (Number)	MD_CoverageDescription (239) [UML]
Short Name	CovDesc
Definition	information about the content of a grid data cell
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrent from referencing object
Data Type	Specified Class (MD_ContentInformation)
Domain	Lines 240-242

Meaning & Purpose

Guidance

Example

Attribute Description

Name (Number)	attributeDescription (240) [UML]
Short Name	attDesc
Definition	description of attribute described by the measurement value
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	RecordType <<Metaclass>>

Meaning & Purpose

Guidance

Example

Content Type

Name (Number)	contentType (241) [UML]
Short Name	contentType
Definition	type of information represented by the cell value
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	MD_CoverageContentTypeCode <<CodeList>>

Meaning & Purpose

Guidance

Example

Coverage Dimension

Name (Number)	<i>Role name:</i> dimension (242) [UML]
Short Name	covDim
Definition	information on the dimensions of the cell measurement value
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	MD_Range Dimension

Meaning & Purpose

Guidance

Example

Image Description

Name (Number)	MD_ImageDescription (243) [UML]
Short Name	ImgDesc
Definition	information about an image's suitability for use
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (MD_CoverageDescription)
Domain	Lines 244-255 and 240-242

Meaning & Purpose

Guidance

Example

Illumination Elevation Angle

Name (Number)	illuminationElevationAngle (244) [UML]
Short Name	illElevAng
Definition	illumination elevation measured in degrees clockwise from the target plane at intersection of the optical line of sight with the Earth's surface. For images from a scanning device, refer to the centre pixel of the image
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Real
Domain	-90 to 90

Meaning & Purpose

Guidance

Example

Illumination Azimuth Angle

Name (Number)	illuminationAzimuthAngle (245) [UML]
Short Name	illAziAng
Definition	illumination azimuth measured in degrees clockwise from true north at the time the image is taken. For images from a scanning device, refer to the centre pixel of the image
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Real
Domain	0,00 to 360

Meaning & Purpose

Guidance

Example

Imaging Condition

Name (Number)	imagingCondition (246) [UML]
Short Name	imagCond
Definition	conditions affected the image
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	MD_ImagingConditionCode <<CodeList>>

Meaning & Purpose

Guidance

Example

Image Quality Code

Name (Number)	imageQualityCode (247) [UML]
Short Name	imagQuCode
Definition	specifies the image quality
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	MD_Identifier <<DataType>>

Meaning & Purpose

Guidance

Example

Cloud Cover Percentage

Name (Number)	cloudCoverPercentage (248) [UML]
Short Name	cloudCovPer
Definition	area of the dataset obscured by clouds, expressed as a percentage of the spatial extent
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Real
Domain	0,0 to 100,0

Meaning & Purpose

Guidance

Example

Processing Level Code

Name (Number)	processingLevelCode (249) [UML]
Short Name	prcTypCde
Definition	image distributor's code that identifies the level of radiometric and geometric processing that has been applied
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	MD_Identifier <<DataType>>

Meaning & Purpose

Guidance

Example

Compression Generation Quantity

Name (Number)	compressionGenerationQuantity (250) [UML]
Short Name	cmpGenQuan
Definition	count of the number of lossy compression cycles performed on the image
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Integer
Domain	Integer

Meaning & Purpose

Guidance

Example

Triangulation Indicator

Name (Number)	triangulationIndicator (251) [UML]
Short Name	trianInd
Definition	indication of whether or not triangulation has been performed upon the image
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Boolean
Domain	0 = no, 1 = yes

Meaning & Purpose

Guidance

Example

Radiometric Calibration Data Availability

Name (Number)	radiometricCalibrationDataAvailability (252) [UML]
Short Name	radCalDatAv
Definition	indication of whether or not the radiometric calibration information for generating the radiometrically calibrated standard data product is available
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Boolean
Domain	0 - no, 1 - yes

Meaning & Purpose

Guidance

Example

Camera Calibration Information Availability

Name (Number)	cameraCalibrationInformationAvailability (253) [UML]
Short Name	camCallnAv
Definition	indication of whether or not constants are available which allow for camera calibration corrections
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Boolean
Domain	0-no, 1-yes

Meaning & Purpose

Guidance

Example

Film Distortion Information Availability

Name (Number)	filmDistortionInformationAvailability (254) [UML]
Short Name	filmDistInAv
Definition	indication of whether or not Calibration Reseau information is available
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Boolean
Domain	0-no, 1-yes

Meaning & Purpose

Guidance

Example

Lens Distortion Information Availability

Name (Number)	lensDistortionInformationAvailability (255) [UML]
Short Name	lenDistInAv
Definition	indication of whether or not lens aberration correction information is available
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Boolean
Domain	0 - no, 1 - yes

Meaning & Purpose

Guidance

Example

7.8. 2 Range Dimension Information (includes Band information)

Range Dimension

Name (Number)	MD_RangeDimension (256) [UML]
Short Name	RangeDim
Definition	information on the range of each dimension of a cell measurement value
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_CoverageDescription)
Domain	Lines 257-258

Meaning & Purpose

Guidance

Example

Sequence Identifier

Name (Number)	sequenceIdentifier (257) [UML]
Short Name	seqID
Definition	number that uniquely identifies instances of bands of wavelengths on which a sensor operates
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	MemberName

Meaning & Purpose

Guidance

Example

Dimension Descriptor

Name (Number)	descriptor (258) [UML]
Short Name	dimDescrp
Definition	description of the range of a cell measurement value
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Band

Name (Number)	MD_Band (259) [UML]
Short Name	Band
Definition	range of wavelengths in the electromagnetic spectrum
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (MD_RangeDimension)
Domain	Lines 260-267 and 257-258

Meaning & Purpose

Guidance

Example

Maximum Value

Name (Number)	maxValue (260) [UML]
Short Name	maxVal
Definition	longest wavelength that the sensor is capable of collecting within a designated band
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Real
Domain	Real

Meaning & Purpose

Guidance

Example

Minimum Value

Name (Number)	minValue (261) [UML]
Short Name	minVal
Definition	shortest wavelength that the sensor is capable of collecting within a designated band
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Real
Domain	Real

Meaning & Purpose

Guidance

Example

Value Units

Name (Number)	units (262) [UML]
Short Name	valUnit
Definition	units in which sensor wavelengths are expressed
Obligation/ Condition	Conditional: mandatory if minValue or maxValue provided
Maximum Occurrence	1
Data Type	Class
Domain	UomLength

Meaning & Purpose

Guidance

Example

Peak Response

Name (Number)	peakResponse (263) [UML]
Short Name	pkResp
Definition	wavelength at which the response is the highest
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Real
Domain	Real

Meaning & Purpose

Guidance

Example

Bits Per Value

Name (Number)	bitsPerValue (264) [UML]
Short Name	bitsPerVal
Definition	maximum number of significant bits in the uncompressed representation for the value in each band of each pixel
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Integer
Domain	Integer

Meaning & Purpose

Guidance

Example

Tone Gradation

Name (Number)	toneGradation (265) [UML]
Short Name	toneGrad
Definition	number of discrete numerical values in the grid data
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Integer
Domain	Integer

Meaning & Purpose

Guidance

Example

Scale Factor

Name (Number)	scaleFactor (266) [UML]
Short Name	sclFac
Definition	scale factor which has been applied to the cell value
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Real
Domain	Real

Meaning & Purpose

Guidance

Example

Offset

Name (Number)	offset (267) [UML]
Short Name	offset
Definition	the physical value corresponding to a cell value of zero
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Real
Domain	Real

Meaning & Purpose

Guidance

Example

7.9 Portrayal Catalogue Information

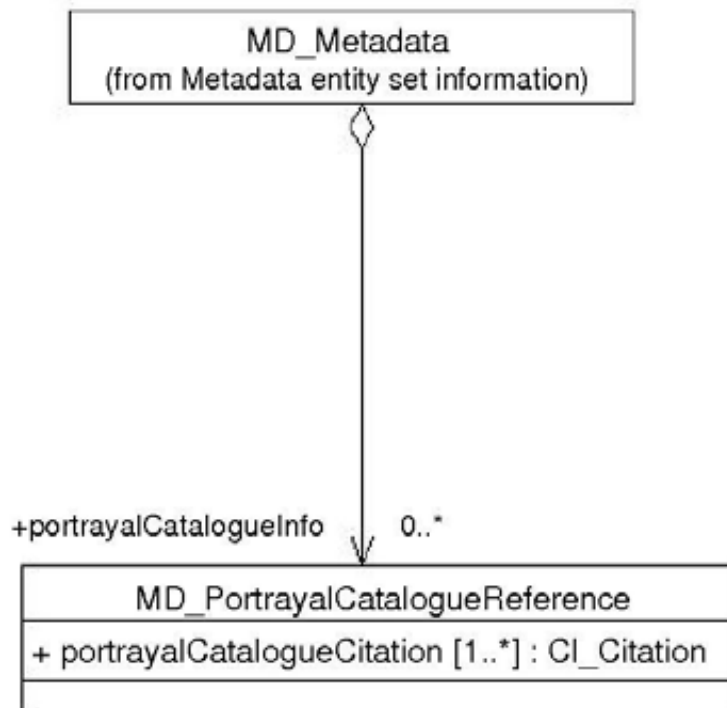


Fig 14. Portrayal catalogue information

(Source : AS/NZS ISO 19115:2005, Figure A.11 Portrayal catalogue information)

7.9.1 Portrayal Catalogue Reference

Name (Number)	MD_PortrayalCatalogueReference (268) [UML]
Short Name	PortCatRef
Definition	information identifying the portrayal catalogue used
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Metadata)
Domain	Line 269

Meaning & Purpose

Guidance

Example

Portrayal Catalogue Citation

Name (Number)	portrayalCatalogueCitation (269) [UML]
Short Name	portCatCit
Definition	bibliographic reference to the portrayal catalogue cited
Obligation/ Condition	Mandatory
Maximum Occurrence	No maximum
Data Type	Class
Domain	CI_Citation <<DataType>>

Meaning & Purpose

Guidance

Example



7.10.1 General

Distribution

Name (Number)	MD_Distribution (270) [UML]
Short Name	Distrib
Definition	information about the distributor and options for obtaining the resource
Obligation/ Condition	Use obligation/condition from referencing object.
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Metadata)
Domain	Lines 271-273

Meaning and Purpose The distribution identifies information about the format, distributor of and/or transfer options for a resource.

Exists to support its children elements and does not contain values in its own right.

Guidance This element could be a sub-element of [distributionInfo](#) (17).

The metadata element content creator is not required to record any information against this element.

If this element exists then either [distributionFormat](#) or [distributorFormat](#) is mandatory.

ANZLIC recommends the use of distributor as it allows for the association between transfer options and their formats.

Example 1

Explanation	The following XML example shows the use of the MD_Distribution when relating two formats to each of their transfer options.
Value	
XML	<pre> <gmd:distributionInfo> <gmd:MD_Distribution> <gmd:distributor> <gmd:MD_Distributor> <gmd:distributorFormat> ... </gmd:distributorFormat> <gmd:distributorTransferOptions> ... </gmd:distributorTransferOptions> </gmd:MD_Distributor> </gmd:distributor> <gmd:distributor> <gmd:MD_Distributor> <gmd:distributorFormat> ... </gmd:distributorFormat> <gmd:distributorTransferOptions> ... </gmd:distributorTransferOptions> </gmd:MD_Distributor> </gmd:distributor> </gmd:MD_Distribution> </gmd:distributionInfo> </pre>

Example 2

Explanation	The following XML example shows the use of the MD_Distribution using a single format and its transfer options.
Value	
XML	<pre> <gmd:distributionInfo> <gmd:MD_Distribution> <gmd:distributionFormat> ... </gmd:distributionFormat> <gmd:transferOptions> ... </gmd:transferOptions> </gmd:MD_Distribution> </gmd:distributionInfo> </pre>

Distribution Format

Name (Number)	<i>Role name:</i> distributionFormat (271) [UML]
Short Name	distFormat
Definition	provides a description of the format of the data to be distributed
Obligation/ Condition	Conditional: mandatory if MD_Distributor.distributorFormat not documented
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_Format

Meaning & Purpose

Guidance

Example

Distributor

Name (Number)	<i>Role name:</i> distributor (272) [UML]
Short Name	distributor
Definition	provides information about the distributor
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_Distributor

Meaning & Purpose

Guidance

Example

Distribution Transfer Options

Name (Number)	Role name: transferOptions (273) [UML]
Short Name	distTranOps
Definition	provides information about technical means and media by which a resource is obtained from the distributor
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_DigitalTransferOptions

Meaning & Purpose

Guidance

Example

7.10. 2 Digital Transfer Options Information

Digital Transfer Options

Name (Number)	MD_DigitalTransferOptions (274) [UML]
Short Name	DigTranOps
Definition	technical means and media by which a resource is obtained from the distributor
Obligation/Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Distribution and MD_Distributor)
Domain	Lines 275-278

Meaning & Purpose The digital transfer options identifies details for obtaining the resource, and may include its size and location.
Exists to support its children elements and does not contain values in its own right.

Guidance The metadata element content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows the use of the MD_DigitalTransferOptions in context
Value	
XML	<pre>... <gmd:MD_DigitalTransferOptions> ... </gmd:MD_DigitalTransferOptions> ...</pre>

Units Of Distribution

Name (Number)	unitsOfDistribution (275) [UML]
Short Name	unitsODist
Definition	tiles, layers, geographic areas, etc., in which data is available
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Transfer Size

Name (Number)	transferSize (276) [UML]
Short Name	transSize
Definition	estimated size of a unit in the specified transfer format, expressed in megabytes. The transfer size is > 0.0
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Real
Domain	> 0,0

Meaning & Purpose

Guidance

Example

Explanation	The following XML example shows the use of the transfersize in context.
Value	20Mb
XML	<pre> ... <gmd:MD_DigitalTransferOptions> ... <gmd:transferSize> <gco:Real>20</gco:Real> </gmd:transferSize> <gmd:onLine> <gmd:CI_OnlineResource> <gmd:linkage> <gmd:URL>file://nas/pathToFile/fileName.extension</gmd:URL> </gmd:linkage> ... </gmd:CI_OnlineResource> </gmd:onLine> ... </gmd:MD_DigitalTransferOptions> ... </pre>

Online Source

Name (Number)	onLine (277) UML
Short Name	onLineSrc
Definition	information about online sources from which the resource can be obtained
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	CI_OnlineResource <<DataType>>

Meaning & Purpose

The online source identifies various online supply details.
This element exists to support class [CI_OnlineResource](#) (396).

Guidance

The metadata element content creator is not required to record any information against this element

Example

Explanation	The following XML example shows the use of the the onLine element in context
Value	
XML	<pre>... <gmd:MD_DigitalTransferOptions> <gmd:onLine> <gmd:CI_OnlineResource> ... </gmd:CI_OnlineResource> </gmd:onLine> </gmd:MD_DigitalTransferOptions> ...</pre>

Offline Media

Name (Number)	offLine (278) UML
Short Name	offLineMed
Definition	information about offline media on which the resource can be obtained
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	MD_Medium <<DataType>>

Meaning & Purpose

Guidance

Example

7.10.3 Distributor Information

Distributor

Name (Number)	MD_Distributor (279) [UML]
Short Name	Distributor
Definition	information about the distributor
Obligation/Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD Distribution and MD Format)
Domain	Lines 280-283

Meaning & Purpose

Guidance

Example

Distributor Contact

Name (Number)	distributorContact (280) [UML]
Short Name	distorCont
Definition	party from whom the resource may be obtained. This list need not be exhaustive
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	CI_ResponsibleParty <<Datatype>>

Meaning & Purpose

Guidance

Example

Distribution Order Process

Name (Number)	<i>Role name:</i> distributionOrderProcess (281) UML
Short Name	distorOrdPrc
Definition	provides information about how the resource may be obtained, and related instructions and fee information
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_StandardOrderProcess

Meaning & Purpose

Guidance

Example

Distributor Format

Name (Number)	<i>Role name:</i> distributorFormat (282) UML
Short Name	distorFormat
Definition	provides information about the format used by the distributor
Obligation/Condition	Conditional: mandatory if MD_Distribution.distributorFormat not documented
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_Format

Meaning & Purpose

Guidance

Example

Distributor Transfer

Name (Number)	Role name: distributorTransferOptions (283) [UML]
Short Name	distorTran
Definition	provides information about the technical means and media used by the distributor
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_DigitalTransferOptions

Meaning & Purpose

Guidance

Example

7.10. 4 Format Information

Format

Name (Number)	MD_Format (284) [UML]
Short Name	Format
Definition	description of the computer language construct that specifies the representation of data objects in a record, file, message, storage device or transmission channel
Obligation/Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Distribution , MD_Identification , and MD_Distributor)
Domain	Lines 285-290

Meaning & Purpose The format identifies the information about the name and version of the format, and may optionally include other optional elements such as amendment number, specification and file decompression technique. Exists to support its children elements and does not contain values in its own right

Guidance MD_Format could occur in a range of circumstances in the metadata record; in particular, within the [MD_Distribution](#) class.

The metadata element content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows the format name and version in context.
Value	
XML	<pre> ... <gmd:MD_Format> <gmd:name> ... </gmd:name> <gmd:version> ... </gmd:version> </gmd:MD_Format> ... </pre>

Format Name

Name (Number)	name (285) [UML]
Short Name	formatName
Definition	name of the data transfer format(s)
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose The name of the format that may exist.

Guidance A concise title of the format.

Example

Explanation	The following XML example shows the format name in context.
Value	MapInfo MID/MIF (format) 6.0 (version)
XML	<pre> ... <gmd:MD_Format> <gmd:name> <gco:CharacterString>MapInfo MID/MIF</gco:CharacterString> </gmd:name> <gmd:version> <gco:CharacterString>6.0</gco:CharacterString> </gmd:version> </gmd:MD_Format> ... </pre>

Format Version

Name (Number)	version (286) [UML]
Short Name	formatVer
Definition	version of the format (date, number etc.)
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose The version of the format that may exist.

Guidance A concise title of the version.

Example 1

Explanation	The following XML example shows the format version in context.
Value	ArcInfo Export (format) 8.0.2 (version)
XML	<pre> ... <gmd:MD_Format> <gmd:name> <gco:CharacterString>ArcInfo Export</gco:CharacterString> </gmd:name> <gmd:version> <gco:CharacterString>8.0.2</gco:CharacterString> </gmd:version> </gmd:MD_Format> ... </pre>

Example 2

Explanation	The following XML example shows the format version in context when there is no version.
Value	ASCII (format) inapplicable (version)
XML	<pre> ... <gmd:MD_Format> <gmd:name> <gco:CharacterString>ASCII</gco:CharacterString> </gmd:name> <gmd:version gco:nilReason="inapplicable"/> </gmd:MD_Format> ... </pre>

Format Amendment Number

Name (Number)	amendmentNumber (287) [UML]
Short Name	formatAmdNum
Definition	amendment number of the format version
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Format Specification

Name (Number)	specification (288) [UML]
Short Name	formatSpec
Definition	name of a subset, profile, or product specification of the format
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

File Decompression Technique

Name (Number)	fileDecompressionTechnique (289) [UML]
Short Name	fileDecmTech
Definition	recommendations of algorithms or processes that can be applied to read or expand resources to which compression techniques have been applied
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Format Distributor

Name (Number)	<i>Role name:</i> formatDistributor (290) [UML]
Short Name	formatDist
Definition	provides information about the distributor's format
Obligation/Condition	Optional
Maximum Occurrence	No Maximum
Data Type	Association
Domain	MD_Distributor

Meaning & Purpose

Guidance

Example

Medium Information**Medium**

Name (Number)	MD_Medium (291) [UML]
Short Name	Medium
Definition	information about the media on which the resource can be distributed
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class <<Data Type>>
Domain	Lines 292-297

Meaning & Purpose

Guidance

Example

Medium Name

Name (Number)	name (292) [UML]
Short Name	medName
Definition	name of the medium on which the resource can be received
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	MD_MediumNameCode <<CodeList>>

Meaning & Purpose

Guidance

Example

Medium Density

Name (Number)	density (293) [UML]
Short Name	medDensity
Definition	density at which the data is recorded
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Real
Domain	> 0,0

Meaning & Purpose

Guidance

Example

Medium Density Units

Name (Number)	densityUnits (294) [UML]
Short Name	medDenUnits
Definition	units of measure for the recording density
Obligation/ Condition	Conditional: mandatory if density documented
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Medium Volume

Name (Number)	volumes (295) [UML]
Short Name	medVol
Definition	number of items in the media identified
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Integer
Domain	> 0

Meaning & Purpose

Guidance

Example

Medium Format

Name (Number)	mediumFormat (296) [UML]
Short Name	medFormat
Definition	method used to write to the medium
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	MD_MediumFormatCode <<CodeList>>

Meaning & Purpose

Guidance

Example

Medium Note

Name (Number)	mediumNote (297) [UML]
Short Name	medNote
Definition	description of other limitations or requirements for using the medium
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Standard Order Process Information**Standard Order Process**

Name (Number)	MD_StandardOrderProcess (298) [UML]
Short Name	StanOrdProc
Definition	common ways in which the resource may be obtained or received, and related instructions and fee information
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Distributor)
Domain	Lines 299-302

Meaning & Purpose

Guidance

Example

Resource Fees

Name (Number)	fees (299) [UML]
Short Name	resFees
Definition	fees and terms for retrieving the resource. Include monetary units (as specified in ISO 4217)
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Planned Available Date Time

Name (Number)	plannedAvailableDateTime (300) [UML]
Short Name	planAvDtTm
Definition	date and time when the resource will be available
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	DateTime

Meaning & Purpose

Guidance

Example

Ordering Instructions

Name (Number)	orderingInstructions (301) [UML]
Short Name	ordInstr
Definition	general instructions, terms and services provided by the distributor
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Order Turnaround

Name (Number)	turnaround (302) [UML]
Short Name	ordTurn
Definition	typical turnaround time for the filling of an order
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

7.11 Metadata Extension Information

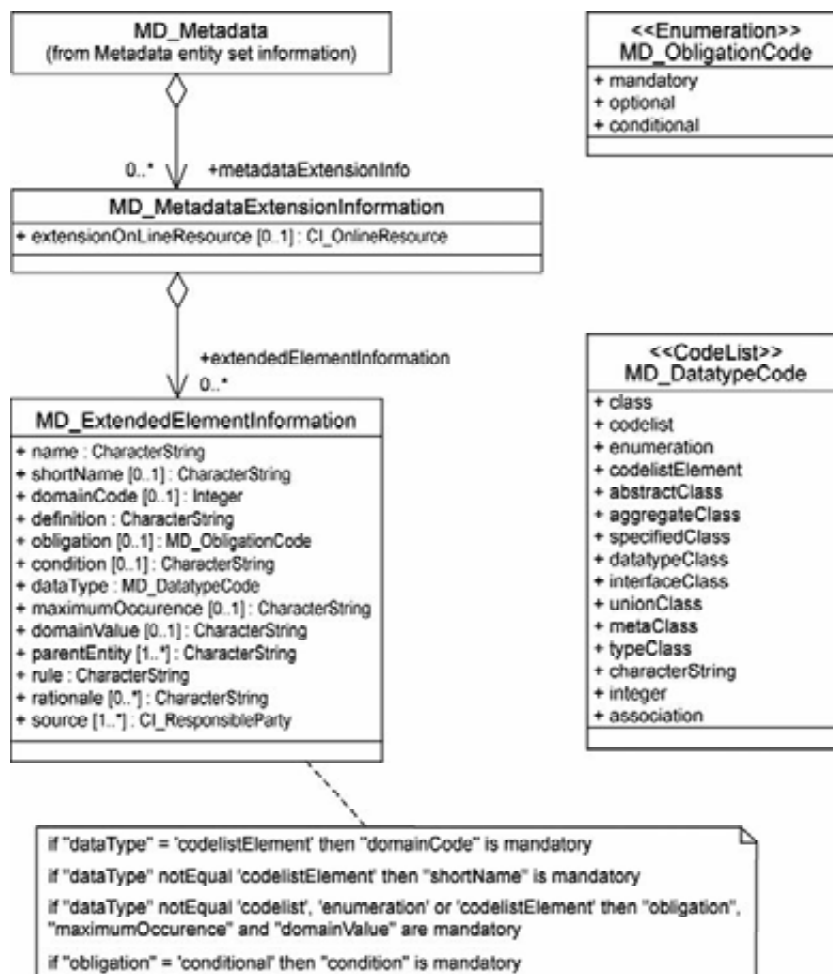


Fig 16. Metadata extension information

(Source : ISO 19115:2003/Cor 1:2006, Figure A.13 Metadata extension information)

7.11. 1 General

Metadata Extension Information

Name (Number)	MD_MetadataExtensionInformation (303) [UML]
Short Name	MdExtInfo
Definition	information describing metadata extensions
Obligation/Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_Metadata)
Domain	Lines 304-305

Meaning & Purpose

Guidance

Example

Extension Online Resource

Name (Number)	<i>Role name:</i> extensionOnLineResource (304) [UML]
Short Name	extOnRes
Definition	information about on-line sources containing the community profile name and the extended metadata elements. Information for all new metadata elements
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	CI_OnlineResource <<DataType>>

Meaning & Purpose

Guidance

Example

Extended Element Information

Name (Number)	<i>Role name:</i> extendedElementInformation (305) [UML]
Short Name	extEleInfo
Definition	provides information about a new metadata element, not found in ISO 19115, which is required to describe geographic data
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Association
Domain	MD_ExtendedElementInformation

Meaning & Purpose

Guidance

Example

7.11.2 Extended Element Information**Extended Element Information**

Name (Number)	MD_ExtendedElementInformation (306) [UML]
Short Name	ExtEleInfo
Definition	new metadata element, not found in ISO 19115, which is required to describe geographic data
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD_MetadataExtensionInformation)
Domain	Lines 307-319

Meaning & Purpose

Guidance

Example

Extended Element Name

Name (Number)	name (307) [UML]
Short Name	extEleName
Definition	name of the extended metadata element
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Extended Short Name

Name (Number)	shortName (308) [UML]
Short Name	extShortName
Definition	short form suitable for use in an implementation method such as XML or SGML. NOTE other methods may be used
Obligation/ Condition	Conditional: mandatory if dataType not Equal "codelistElement"
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Extended Domain Code

Name (Number)	domainCode (309) [UML]
Short Name	extDomCode
Definition	three digit code assigned to the extended element
Obligation/ Condition	Conditional: mandatory if dataType is "codelistElement"
Maximum Occurrence	1
Data Type	Integer
Domain	Integer

Meaning & Purpose

Guidance

Example

Extended Element Definition

Name (Number)	definition (310) [UML]
Short Name	extEleDef
Definition	definition of the extended element
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Extended Element Obligation

Name (Number)	obligation (311) [UML]
Short Name	extEleOb
Definition	obligation of the extended element
Obligation/ Condition	Conditional: mandatory if dataType is not "codelist", "enumeration" or "codelistElement"
Maximum Occurrence	1
Data Type	Class
Domain	MD_ObligationCode <<Enumeration>>

Meaning & Purpose

Guidance

Example

Extended Element Condition

Name (Number)	condition (312) [UML]
Short Name	extEleCond
Definition	condition under which the extended element is mandatory
Obligation/ Condition	Conditional: mandatory if obligation = "conditional"
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Element Data Type

Name (Number)	dataType (313) UML
Short Name	eleDataType
Definition	code which identifies the kind of value provided in the extended element
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	MD_DatatypeCode <<CodeList>>

Meaning & Purpose

Guidance

Example

Extended Element Maximum Occurrence

Name (Number)	maximumOccurrence (314) UML
Short Name	extEleMxOc
Definition	maximum occurrence of the extended element
Obligation/ Condition	Conditional: mandatory if dataType not "codelist", "enumeration" or "codelistElement"
Maximum Occurrence	1
Data Type	CharacterString
Domain	N or any integer

Meaning & Purpose

Guidance

Example

Extended Element Domain Value

Name (Number)	domainValue (315) [UML]
Short Name	extEleDomVal
Definition	valid values that can be assigned to the extended element
Obligation/Condition	Conditional: mandatory if dataType not "codelist", "enumeration" or "codelistElement"
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Extended Element Parent Entity

Name (Number)	parentEntity (316) [UML]
Short Name	extEleParEnt
Definition	name of the metadata entity(s) under which this extended metadata element may appear. The name(s) may be standard metadata element(s) of other extended metadata element(s)
Obligation/Condition	Mandatory
Maximum Occurrence	No maximum
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Extended Element Rule

Name (Number)	rule (317) [UML]
Short Name	extEleRule
Definition	specifies how the extended element relates to other existing elements and entities
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Extended Element Rationale

Name (Number)	rationale (318) [UML]
Short Name	extEleRat
Definition	reason for creating the extended element
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Extended Element Source

Name (Number)	source (319) [UML]
Short Name	extEleSrc
Definition	name of the person or organization creating the extended element
Obligation/ Condition	Mandatory
Maximum Occurrence	No maximum
Data Type	Class
Domain	CI_ResponsibleParty <<DataType>>

Meaning & Purpose

Guidance

Example

7.12 Application Schema Information

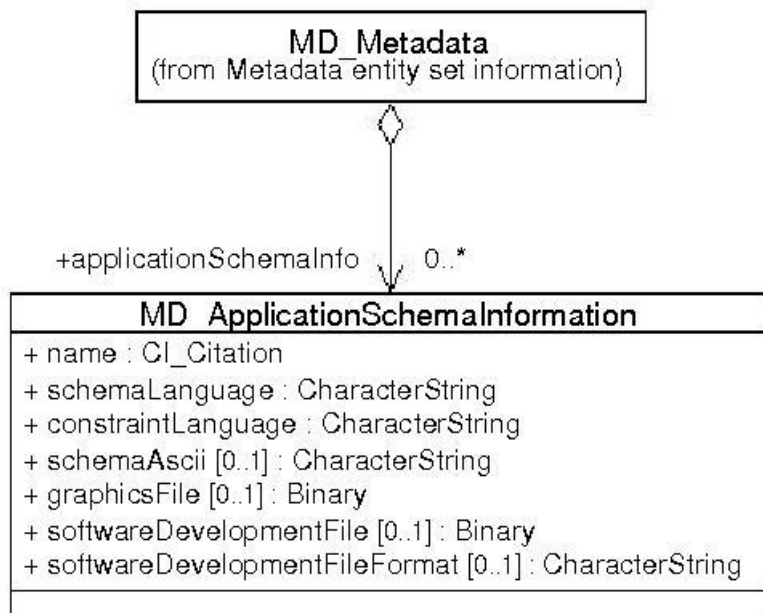


Fig 17. Potrayal catalogue information

(Source : ISO 19115:2003/Cor 1:2006, Figure A.11 Potrayal catalogue)

information)

7.12. 1 Application Schema Information

Name (Number)	MD_ApplicationSchemaInformation (320) [UML]
Short Name	AppSchInfo
Definition	information about the application schema used to build the dataset
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (MD Metadata)
Domain	Lines 321-327

Meaning & Purpose

Guidance

Example

Application Schema Name

Name (Number)	name (321) [UML]
Short Name	asName
Definition	name of the application schema used.
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	CI_Citation <<DataType>>

Meaning & Purpose

Guidance

Example

Application Schema Language

Name (Number)	schemaLanguage (322) [UML]
Short Name	asSchLang
Definition	identification of the schema language used
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Application Schema Constraint Language

Name (Number)	constraintLanguage (323) [UML]
Short Name	asCstLang
Definition	formal language used in Application Schema
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Character string
Domain	Free text

Meaning & Purpose

Guidance

Example

Application Schema Ascii

Name (Number)	schemaAscii (324) [UML]
Short Name	asAscii
Definition	full application schema given as an ASCII file
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Application Schema Graphics File

Name (Number)	graphicsFile (325) [UML]
Short Name	asGraFile
Definition	full application schema given as a graphics file
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Binary
Domain	Binary

Meaning & Purpose

Guidance

Example

Application Schema Software Development File

Name (Number)	softwareDevelopmentFile (326) [UML]
Short Name	asSwDevFile
Definition	full application schema given as a software development file
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Binary
Domain	Binary

Meaning & Purpose

Guidance

Example

Application Schema Software Development File Format

Name (Number)	softwareDevelopmentFileFormat (327) [UML]
Short Name	asSwDevFiFt
Definition	software dependent format used for the application schema software dependent file
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

7.13 Extent Information

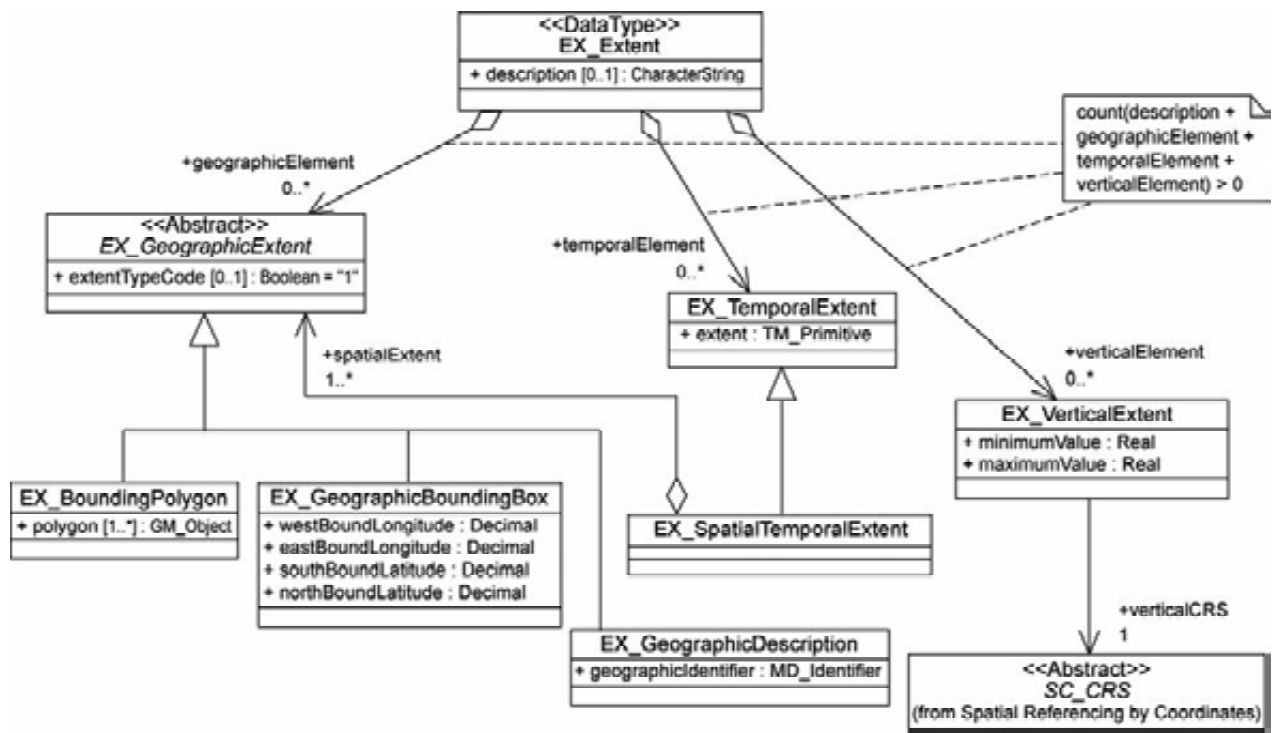


Fig 18. Extent information

(Source : ISO 19115:2003/Cor 1:2006, Figure A.15 Extent information)

7.13.1 General

Extent

Name (Number)	EX_Extent (334) UML
Short Name	Extent
Definition	information about horizontal, vertical, and temporal extent
Obligation/Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class <<Data Type>>
Domain	Lines 335-338

Meaning & Purpose

The extent contains information to give a basic description of the spatial and temporal extent of the resource. The EX_Extent entity contains information about a description and the geographic, temporal and vertical extents of the resource.

Guidance

For a geographic 'dataset' either the bounding box or geographic description

is mandatory.

The EX_Extent entity has three optional roles ([geographicElement](#), [temporalElement](#) and [verticalElement](#)) and an optional element, [description](#). At least one of the four shall be used.

The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows the extent in context.
Value	
XML	<pre> <gmd:MD_Metadata> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> ... <gmd:extent> <gmd:EX_Extent> <gmd:geographicElement> ... </gmd:geographicElement> ... </gmd:EX_Extent> </gmd:extent> ... <gmd:extent> <gmd:EX_Extent> <gmd:temporalElement> ... </gmd:temporalElement> ... </gmd:EX_Extent> </gmd:extent> ... <gmd:extent> <gmd:EX_Extent> <gmd:verticalElement> ... </gmd:verticalElement> ... </gmd:EX_Extent> </gmd:extent> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata> </pre>

Extent Description

Name (Number)	description (335) [UML]
Short Name	exDesc
Definition	spatial and temporal extent for the referring object
Obligation/Condition	Conditional: mandatory if geographicElement and temporalElement and verticalElement not documented
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose The extent description textually defines the spatial and temporal extent of the resource.

This element can be used as a free text description of the extent and may be in addition to more specific extent elements.

Guidance This element is useful to describe a non-spatial or non-temporal extent of a resource. For example:

- a classification range such as temperature (30 to 50 degrees Celsius);
- vegetation density (sparsely to heavily vegetated);
- objects with no assigned spatial component (e.g. fish tank or Geoscience Australia).

This description can provide useful information about the spatial extent of the dataset; especially where that extent is not registered in an accessible Geographic Extent Names register. If the description is commonly used it is recommended that it be registered as a geographic identifier.

Example 1

Explanation	The following XML example shows the description of a temperature range in context.
Value	30 to 50 degrees Celsius
XML	<pre><gmd:MD_Metadata> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> ... <gmd:extent> <gmd:EX_Extent> <gmd:description> <gco:CharacterString>30 to 50 degrees Celsius </gco:CharacterString> </gmd:description> ... </gmd:EX_Extent> </gmd:extent> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata></pre>

Example 2

Explanation	The following XML example shows the Description of the intertidal zone for Western Port Bay in Victoria in context.
Value	Western Port Bay (Victoria) intertidal zone
XML	<pre> <gmd:MD_Metadata> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> ... <gmd:extent> <gmd:EX_Extent> <gmd:description> <gco:CharacterString> Western Port Bay (Victoria) intertidal zone </gco:CharacterString> </gmd:description> ... </gmd:EX_Extent> </gmd:extent> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata> </pre>

Geographic Element

Name (Number)	<i>Role name:</i> geographicElement (336) [UML]
Short Name	geoEle
Definition	provides geographic component of the extent of the referring object
Obligation/Condition	Conditional: mandatory if description and temporalExtent and verticalExtent not documented
Maximum Occurrence	No maximum
Data Type	Association
Domain	EX_GeographicExtent <<Abstract>>

Meaning & Purpose

The geographic element contains basic information about the geographic extent of the resource, including bounding boxes or geographic extent names or bounding polygons and extent type.

This element exists to support the classes [EX BoundingPolygon](#), [EX GeographicBoundingBox](#) and [EX GeographicDescription](#); and the

[extentTypeCode](#) element.

Guidance

ANZLIC recommends that at least the geographic bounding box is provided.

This contains no specific value in its own right.

The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows the geographical element in context.
Value	
XML	<pre> <gmd:MD_Metadata> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> ... <gmd:extent> <gmd:EX_Extent> <gmd:geographicElement> <gmd:EX_GeographicBoundingBox> ... </gmd:EX_GeographicBoundingBox> </gmd:geographicElement> ... </gmd:EX_Extent> </gmd:extent> ... <gmd:extent> <gmd:EX_Extent> <gmd:geographicElement> <gmd:EX_GeographicDescription> ... </gmd:EX_GeographicDescription> </gmd:geographicElement> </gmd:extent> ... <gmd:extent> <gmd:EX_Extent> <gmd:geographicElement> <gmd:EX_BoundingPolygon> ... </gmd:EX_BoundingPolygon> </gmd:geographicElement> </gmd:EX_Extent> </gmd:extent> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata> </pre>

Temporal Element

Name (Number)	Role name: temporalElement (337) [UML]
Short Name	tempEle
Definition	provides temporal component of the extent of the referring object
Obligation/ Condition	Conditional: mandatory if description and geographicElement and verticalElement not documented
Maximum Occurrence	No maximum
Data Type	Association
Domain	EX_TemporalExtent

Meaning & Purpose

Guidance

Example

Vertical Element

Name (Number)	Role name: verticalElement (338) [UML]
Short Name	vertEle
Definition	provides the vertical component of the extent of the referring object
Obligation/ Condition	Conditional: mandatory if description and geographicElement and temporalElement not documented
Maximum Occurrence	No Maximum
Data Type	Association
Domain	EX_VerticalExtent (B.3.1.4)

Meaning & Purpose

Guidance

Example

7.13. 2 Geographic Extent Information

Geographic Extent

Name (Number)	EX_GeographicExtent (339) [UML]
Short Name	GeoExtent
Definition	geographic area of the dataset
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (EX_Extent and EX_SpatialTemporalExtent) <<Abstract>>
Domain	Line 340

Meaning & Purpose The geographic extent contains information to identify the geographic extent of the resource.

Geographic extent includes information about the extent type, bounding polygon, geographic bounding box, and/or geographic description.

The content of [EX_GeographicExtent](#) is mandatory for 'dataset'; although [EX_GeographicExtent](#), being an abstract type, will never be instantiated.

The [EX_GeographicExtent](#) entity may be specified (subclassed) as [EX_BoundingPolygon](#),

Guidance The geographic extent must include the entire area of study or reference, as it will be equally important for users to understand both where features exist as well as where they do not.

Must not be instantiated.

The metadata content creator is not required to record any information against this element.

Example

Extent Type Code

Name (Number)	extentTypeCode (340) [UML]
Short Name	exTypeCode
Definition	indication of whether the bounding polygon encompasses an area covered by the data or an area where data is not present
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Boolean
Domain	0 - exclusion, 1 - inclusion

Meaning & Purpose

Guidance

Example

Bounding Polygon

Name (Number)	EX_BoundingPolygon (341) [UML]
Short Name	BoundPoly
Definition	boundary enclosing the dataset, expressed as the closed set of (x,y) coordinates of the polygon (last point replicates first point)
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (EX_GeographicExtent)
Domain	Lines 342 and 340

Meaning & Purpose

Guidance

Example

Polygon

Name (Number)	polygon (342) [UML]
Short Name	polygon
Definition	set of points defining the bounding polygon
Obligation/Condition	Mandatory
Maximum Occurrence	No maximum
Data Type	Class
Domain	GM_Object

Meaning & Purpose

Guidance

Example

Geographic Bounding Box

Name (Number)	EX_GeographicBoundingBox (343) [UML]
Short Name	GeoBndBox
Definition	geographic position of the dataset. NOTE This is only an approximate reference so specifying the coordinate reference system is unnecessary
Obligation/Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (EX_GeographicExtent)
Domain	Lines 344-347 and 340

Meaning & Purpose The geographic bounding box contains values for the approximate longitudes and latitudes that bound the resource, and its extent type (inclusive or exclusive).

Guidance This contains no specific value in its own right.

The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows the EX_GeographicBoundingBox for the Australian Exclusive Economic Zone (EEZ) in context.
Value	1, 92, 172, -60, -8
XML	<pre> <gmd:MD_Metadata> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> ... <gmd:extent> <gmd:EX_Extent> <gmd:geographicElement> <gmd:EX_GeographicBoundingBox> <gmd:extentTypeCode> <gco:Boolean>1</gco:Boolean> </gmd:extentTypeCode> <gmd:westBoundLongitude> <gco:Decimal>92</gco:Decimal> </gmd:westBoundLongitude> <gmd:eastBoundLongitude> <gco:Decimal>172</gco:Decimal> </gmd:eastBoundLongitude> <gmd:southBoundLatitude> <gco:Decimal>-60</gco:Decimal> </gmd:southBoundLatitude> <gmd:northBoundLatitude> <gco:Decimal>-8</gco:Decimal> </gmd:northBoundLatitude> </gmd:EX_GeographicBoundingBox> </gmd:geographicElement> ... </gmd:EX_Extent> </gmd:extent> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata> </pre>

West Bounding Longitude

Name (Number)	westBoundLongitude (344) [UML]
Short Name	westBL
Definition	western-most coordinate of the limit of the dataset extent, expressed in longitude in decimal degrees (positive east)
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Decimal
Domain	-180,0 <=West Bounding Longitude Value <=180,0

Meaning & Purpose The west bounding longitude provides an approximation of the western-most limit of the resource, as decimal degrees longitude. Note: this may either be an inclusive or exclusive limit (see extent type code).

Guidance Value to be added as decimalised degree of Longitude (to a maximum of 2 decimal places). Longitudes west of the 0 degree meridian (Greenwich) are expressed as negative numbers. Note: If the bounding box spans the international dateline then the west bounding longitude will be greater than the east bounding longitude.

Example

Explanation	The following XML example shows the west bounding longitude of the extent in context.
Value	174.67 [degrees East]
XML	<pre> <gmd:MD_Metadata> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> ... <gmd:extent> <gmd:EX_Extent> <gmd:geographicElement> <gmd:EX_GeographicBoundingBox> ... <gmd:westBoundLongitude> <gco:Decimal>174.67</gco:Decimal> </gmd:westBoundLongitude> ... </gmd:EX_GeographicBoundingBox> </gmd:geographicElement> ... </gmd:EX_Extent> </gmd:extent> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata> </pre>

East Bounding Longitude

Name (Number)	eastBoundLongitude (345) UML
Short Name	eastBL
Definition	eastern-most coordinate of the limit of the dataset extent, expressed in longitude in decimal degrees (positive east)
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Decimal
Domain	-180,0 <= East Bounding Longitude Value <= 180,0

Meaning & Purpose East bounding longitude provides an approximation of the eastern-most limit of the resource, as decimal degrees longitude. Note: this may either be an inclusive or exclusive limit (see extent type code).

Guidance Value to be added as decimalised degree of Longitude (to a maximum of 2 decimal places). Longitudes west of the 0 degree meridian (Greenwich) are expressed as negative numbers. Note: If the bounding box spans the international dateline then the east bounding longitude will be less than the west bounding longitude.

Example

Explanation	The following XML example shows the east bounding longitude of the extent in context
Value	174.67 [degrees East]
XML	<pre> <gmd:MD_Metadata> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> ... <gmd:extent> <gmd:EX_Extent> <gmd:geographicElement> <gmd:EX_GeographicBoundingBox> ... <gmd:eastBoundLongitude> <gco:Decimal>174.67</gco:Decimal> </gmd:eastBoundLongitude> ... </gmd:EX_GeographicBoundingBox> </gmd:geographicElement> ... </gmd:EX_Extent> </gmd:extent> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata> </pre>

South Bounding Latitude

Name (Number)	southBoundLatitude (346) [UML]
Short Name	southBL
Definition	southern-most coordinate of the limit of the dataset extent, expressed in latitude in decimal degrees (positive north)
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Decimal
Domain	-90,0 <= South Bounding Latitude Value <= 90,0; South Bounding Latitude Value <= North Bounding Latitude Value

Meaning & Purpose The south bounding latitude provides an approximation of the southern-most limit of the resource, as decimal degrees latitude. Note: this may either be an inclusive or exclusive limit (see extent type code).

Guidance Value to be added as decimalised degree of Latitude (to a maximum of 2 decimal places). Latitudes south of the equator are expressed as negative numbers.

Example

Explanation	The following XML example shows the south bounding latitude of the extent in context.
Value	45.67 [degrees South]
XML	<pre> <gmd:MD_Metadata> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> ... <gmd:extent> <gmd:EX_Extent> <gmd:geographicElement> <gmd:EX_GeographicBoundingBox> ... <gmd:southBoundLatitude> <gco:Decimal>-45.67</gco:Decimal> </gmd:southBoundLatitude> ... </gmd:EX_GeographicBoundingBox> </gmd:geographicElement> ... </gmd:EX_Extent> </gmd:extent> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata> </pre>

North Bounding Latitude

Name (Number)	northBoundLatitude (347) [UML]
Short Name	northBL
Definition	northern-most coordinate of the limit of the dataset extent, expressed in latitude in decimal degrees (positive north)
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Decimal
Domain	-90,0 <= North Bounding Latitude Value <= 90,0; North Bounding Latitude Value >= South Bounding Latitude Value

Meaning & Purpose The north bounding latitude provides an approximation of the northern-most limit of the resource, as decimal degrees latitude. Note: this may either be an inclusive or exclusive limit (see extent type code).

Guidance Value to be added as decimalised degree of Latitude (to a maximum of 2 decimal places). Latitudes south of the equator are expressed as negative numbers.

Example

Explanation	The following XML example shows the north bounding latitude of the extent in context.
Value	45.67 [degrees South]
XML	<pre> <gmd:MD_Metadata> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> ... <gmd:extent> <gmd:EX_Extent> <gmd:geographicElement> <gmd:EX_GeographicBoundingBox> ... <gmd:northBoundLatitude> <gco:Decimal>-45.67</gco:Decimal> </gmd:northBoundLatitude> ... </gmd:EX_GeographicBoundingBox> </gmd:geographicElement> ... </gmd:EX_Extent> </gmd:extent> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata> </pre>

Geographic Description

Name (Number)	EX_GeographicDescription (348) UML
Short Name	GeoDesc
Definition	description of the geographic area using identifiers
Obligation/Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Specified Class (EX_GeographicExtent)
Domain	Lines 349 and 340

Meaning & Purpose	The geographic description contains an identifier for a geographic area of the resource, and its extent type (inclusive or exclusive).
Guidance	<p>This contains no specific value in its own right.</p> <p>The metadata content creator is not required to record any information against this element.</p>

Example

Explanation	The following XML example shows the geographic description in context
Value	
XML	<pre> <gmd:MD_Metadata> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> ... <gmd:extent> <gmd:EX_Extent> ... <gmd:geographicElement> <gmd:EX_GeographicDescription> <gmd:geographicIdentifier> ... </gmd:geographicIdentifier> </gmd:EX_GeographicDescription> </gmd:geographicElement> </gmd:extent> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata> </pre>

Geographic Identifier

Name (Number)	geographicIdentifier (349) UML
Short Name	geold
Definition	identifier used to represent a geographic area
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	MD_Identifier

Meaning & Purpose The geographic identifier contains an identifier for a geographic area of the resource.

Guidance This contains no specific value in its own right. The value for [MD_Identifier](#) /code should be drawn from an authoritative source such as the 'ANZLIC Geographic Extent Name Register'

<http://www.anzlic.org.au/.../anzlic-allgens.xml>

The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows the geographic identifier in context.
Value	
XML	<pre> <gmd:MD_Metadata> ... <gmd:identificationInfo> <gmd:MD_DataIdentification> ... <gmd:extent> <gmd:EX_Extent> ... <gmd:geographicElement> <gmd:EX_GeographicDescription> <gmd:geographicIdentifier> <gmd:MD_Identifier> ... </gmd:MD_Identifier> </gmd:geographicIdentifier> </gmd:EX_GeographicDescription> </gmd:geographicElement> </gmd:extent> ... </gmd:MD_DataIdentification> </gmd:identificationInfo> ... </gmd:MD_Metadata> </pre>

7.13.3 Temporal Extent Information

Temporal Extent

Name (Number)	EX_TemporalExtent (350) [UML]
Short Name	TempExtent
Definition	time period covered by the content of the dataset
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (EX_Extent)
Domain	Line 351

Meaning & Purpose

Guidance

Example

Extent Temporal

Name (Number)	extent (351) UML
Short Name	exTemp
Definition	date and time for the content of the dataset
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	TM_Primitive

Meaning & Purpose

The date or period that best reflects the on-the-ground currency of this dataset.. This element assists the enquirer to search for datasets of a particular currency.

The temporal extent should be defined in the format prescribed by ISO 8601 and should only incorporate days and time values if that level of precision is important to users of the dataset (or metadata). See section '[Date and Date/Time](#)' for ISO 8601 valid formats.

Guidance

ISO 8601 Date Encoding Scheme compulsory ISO 8601 describes a large number of date/time formats. To reduce the scope for error, it is useful to restrict the supported formats.

Refer to '[Date and Date/Time](#)'

Example

Spatial Temporal Extent

Name (Number)	EX_SpatialTemporalExtent (352) [UML]
Short Name	SpatTempEx
Definition	extent with respect to date/time and spatial boundaries
Obligation/ Condition	Use obligation/condition from referencing object.
Maximum Occurrence	Use maximum occurrence from referencing object.
Data Type	Specified Class (Ex_TemporalExtent)
Domain	Line 353 and 351

Meaning & Purpose

Guidance

Example

Spatial Extent

Name (Number)	<i>Role name:</i> spatialExtent (353) [UML]
Short Name	exSpat
Definition	spatial extent component of composite spatial and temporal extent
Obligation/ Condition	Mandatory
Maximum Occurrence	No maximum
Data Type	Association
Domain	Ex_GeographicExtent <<Abstract>>

Meaning & Purpose

Guidance

Example

7.13. 4 Vertical Extent Information

Vertical Extent

Name (Number)	EX_VerticalExtent (354) [UML]
Short Name	VertExtent
Definition	vertical domain of dataset
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Aggregated Class (Ex_Extent)
Domain	Lines 355-358

Meaning & Purpose

Guidance

Example

Minimum Vertical Value

Name (Number)	minimumValue (355) [UML]
Short Name	vertMinVal
Definition	lowest vertical extent contained in the dataset
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Real
Domain	Real

Meaning & Purpose

Guidance

Example

Maximum Vertical Value

Name (Number)	maximumValue (356) [UML]
Short Name	vertMaxVal
Definition	highest vertical extent contained in the dataset
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Real
Domain	Real

Meaning & Purpose

Guidance

Example

Vertical Coordinate Reference System

Name (Number)	<i>Role name:</i> verticalCRS (358) [UML]
Short Name	vertCRS
Definition	provides information about the vertical coordinate reference system to which the maximum and minimum elevation values are measured. The CRS identification includes unit of measure
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	Association
Domain	SC_CRS

Meaning & Purpose

Guidance

Example

7.14 Citation and Responsible Party Information

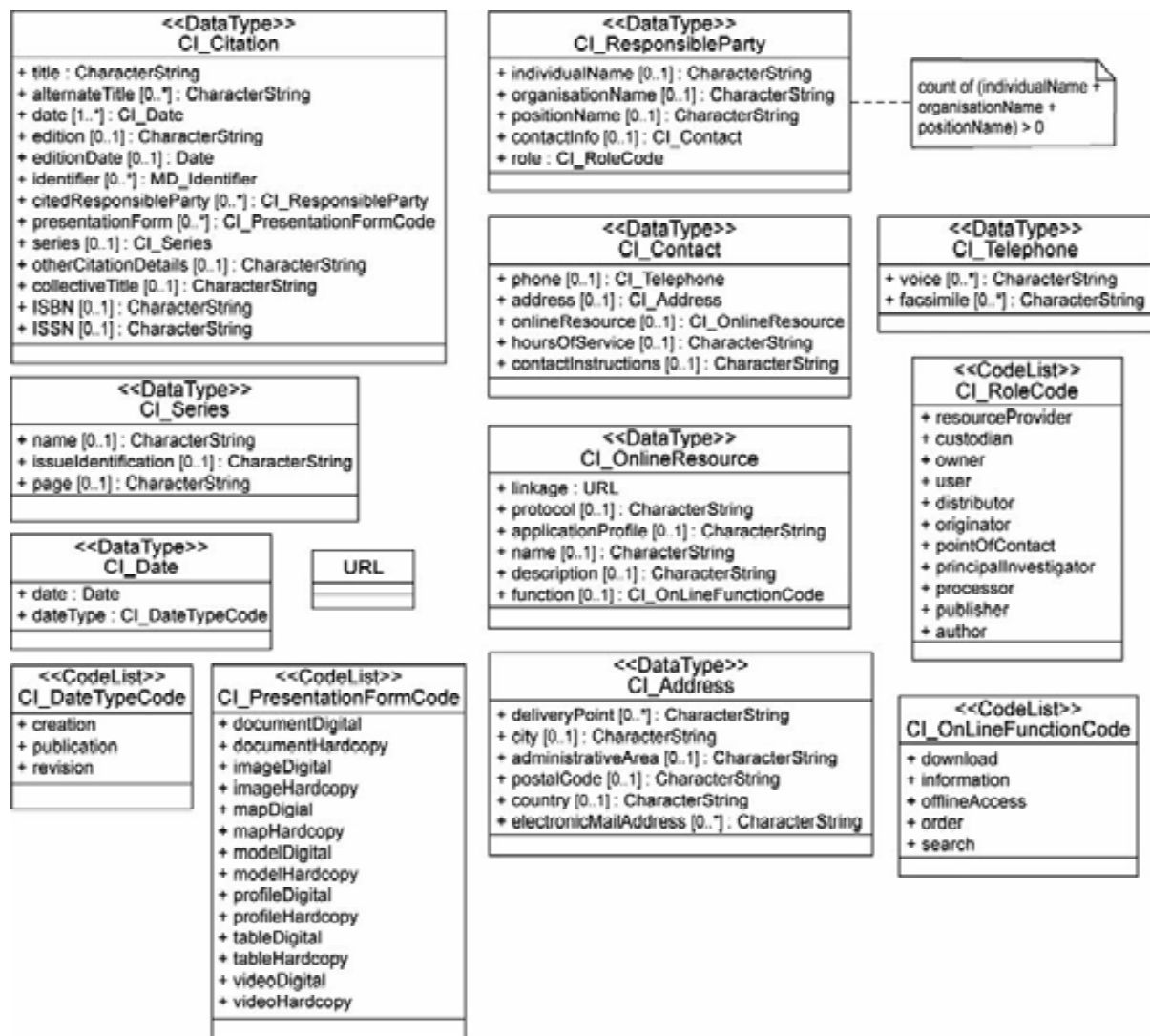


Fig 19. Citation and responsible party information

(Source : ISO 19115:2003/Cor 1:2006, Figure A.16 Citation and responsible party information)

7.14.1 General

Citation

Name (Number)	CI_Citation (359) UML
Short Name	Citation
Definition	standardized resource reference
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class <<DataType>>
Domain	Lines 360-373

Meaning & Purpose The citation contains information to give a basic citation for the resource, including the title and date.

Guidance This contains no specific value in its own right. The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows the citation in context.
Value	ANZLIC - Geographic Extent Name Register
XML	<pre> ... <gmd:CI_Citation> <gmd:title> <gco:CharacterString>ANZLIC - Geographic Extent Name Register</gco:CharacterString> </gmd:title> ... <gmd:date> ... </gmd:date> ... </gmd:CI_Citation> ... </pre>

Resource Title

Name (Number)	title (360) [UML]
Short Name	resTitle
Definition	name by which the cited resource is known
Obligation/ Condition	Mandatory
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose	<p>The resource title is the official name used for the resource.</p> <p>Where no formal name exists for the resource, a useful name for the resource should be assigned.</p>
Guidance	<p>If the resource is a text document, use the full title as it appears on the title page; otherwise use a meaningful, plain language phrase for that resource (i.e. do not use the file name)</p> <p>Title naming conventions should be consistently used for related resources (e.g. to facilitate discovery). To discriminate between duplicate titles, a reference to the version should be included in the title.</p> <p>For identification purposes, it is important to carefully complete this element.</p> <p>Other users should easily understand the title.</p> <p>If the resource is known by an alternate title, include this in the alternatetitle element (361).</p>

Example

Explanation	The following XML example shows the title in context.
Value	New Zealand Geographic Place Name Database
XML	<pre> ... <gmd:CI_Citation> <gmd:title> <gco:CharacterString>New Zealand Geographic Place Name Database</gco:CharacterString> </gmd:title> ... </gmd:CI_Citation> ... </pre>

Resource Alternate Title

Name (Number)	alternateTitle (361) [UML]
Short Name	resAltTitle
Definition	short name or other language name by which the cited information is known. Example: "DCW" as an alternative title for "Digital Chart of the World"
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	CharacterString
Domain	Free text

Meaning & Purpose Enables the user to put in other names that a resource is known by such as by the publisher or author record the other names that a resource is known by, such as by the publisher or author or acronym

Guidance see Resource Title

Example see Resource Title.

Resource Reference Date

Name (Number)	date (362) UML
Short Name	resRefDate
Definition	reference date for the cited resource
Obligation/Condition	Mandatory
Maximum Occurrence	No maximum
Data Type	Class
Domain	CI_Date << DateType >>

Meaning & Purpose The resource reference date contains details about the date and date type of the resource.

This element exists to supports the class [CI_Date](#).

Guidance This contains no specific value in its own right.

Example

Explanation	The following XML example shows a generic container for dates.
Value	
XML	<pre> ... <gmd:CI_Citation> ... <gmd:date> <gmd:CI_Date> ... </gmd:CI_Date> </gmd:date> ... </gmd:CI_Citation> ... </pre>

Resource Edition

Name (Number)	edition (363) UML
Short Name	resEd
Definition	version of the cited resource
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose This element is used to identify (using free text, e.g. "Second") a specific version or edition of the cited resource. It should be noted that the "cited resource" could be the resource that the metadata is describing or other items such as the edition of the authority of a codelist or the specification of a conformance result.

Guidance A new edition could be produced to coincide with any event considered to warrant a new edition. Such events could include when a snapshot of the cited resource is taken in preparation for the publication of the cited resource, when a model change is made or when a significant change to the content of the cited resource is made.

Example

Explanation	The following XML shows a cited resource version 1.1
Value	1.1
XML	<pre> ... <gmd:CI_Citation> <gmd:title> ... </gmd:title> ... <gmd:date> ... </gmd:date> <gmd:edition> <gco:CharacterString>1.1</gco:CharacterString> </gmd:edition> ... </gmd:CI_Citation> ... </pre>

Resource Edition Date

Name (Number)	editionDate (364) UML
Short Name	resEdDate
Definition	date of the edition
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	Date

Meaning & Purpose This element is intended to specify the date of the edition.

Guidance Enter the date associated with the specific edition of the cited resource. Follow the date guidance as set out in the section on reference date.

Example

Explanation	The following XML shows an edition date of the 1st March 2007
Value	2007-03-01
XML	<pre> ... <gmd:CI_Citation> <gmd:title> ... </gmd:title> ... <gmd:date> ... </gmd:date> ... <gmd:editionDate> <gco>Date>2007-03-01</gco>Date> </gmd:editionDate> ... </gmd:CI_Citation> ... </pre>

Citation Identifier

Name (Number)	identifier (365) [UML]
Short Name	citId
Definition	value uniquely identifying an object within a namespace
Obligation/Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	MD_Identifier <<DataType>>

Meaning & Purpose

Identifies a value related to the cited resource that uniquely identifies an object within a namespace. This element describes various details of an identifier associated with the cited resource.

This element is not populated.

Guidance

This element has no specific value but provides the structure for an instance of the class [MD_Identifier](#)

Example

Cited Responsible Party

Name (Number)	citedResponsibleParty (367) [UML]
Short Name	citRespParty
Definition	name and position information for an individual or organization that is responsible for the resource
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	CI_ResponsibleParty <<DataType>>

Meaning & Purpose

Guidance

Example

Presentation Form

Name (Number)	presentationForm (368) [UML]
Short Name	presForm
Definition	mode in which the resource is represented
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	Class
Domain	CI_PresentationFormCode <<CodeList>>

Meaning & Purpose

Guidance

Example

Dataset Series

Name (Number)	series (369) [UML]
Short Name	datasetSeries
Definition	information about the series, or aggregate dataset, of which the dataset is a part
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	CI_Series <<DataType>>

Meaning & Purpose

Guidance

Example

Other Citation Details

Name (Number)	otherCitationDetails (370) [UML]
Short Name	otherCitDet
Definition	other information required to complete the citation that is not recorded elsewhere
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free Text

Meaning & Purpose

Guidance

Example

Collective Title

Name (Number)	collectiveTitle (371) [UML]
Short Name	collTitle
Definition	common title with holdings note NOTE title identifies elements of a series collectively, combined with information about what volumes are available at the source cited
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free Text

Meaning & Purpose

Guidance

Example

International Standard Book Number (ISBN)

Name (Number)	ISBN (372) [UML]
Short Name	isbn
Definition	international Standard Book Number
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free Text

Meaning & Purpose

Guidance

Example

International Standard Serial Number (ISSN)

Name (Number)	ISSN (373) [UML]
Short Name	issn
Definition	international Standard Serial Number
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free Text

Meaning & Purpose

Guidance

Example

Responsible Party

Name (Number)	CI_ResponsibleParty (374) [UML]
Short Name	RespParty
Definition	identification of, and means of communication with, person(s) and organizations associated with the dataset
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class <<DataType>>
Domain	Lines 375-379

Meaning & Purpose

The responsible party provides information about who is responsible for a resource, and can contain the identity of the person, position, organisation, their contact details and role.

The location of of the responsible person or organisation is defined in [CI Address](#).

Please note: for the purpose of describing this element, the reference to ‘dataset’ in the definition applies to all ‘resources’.

Guidance

This contains no specific value in its own right. The role and at least one of [individualName](#), [organisationName](#) or [positionName](#) elements must be

provided.

The metadata content creator is not required to record any information against this element.

Example

Explanation	The following XML example shows the generic container for responsible party
Value	
XML	<pre> ... <gmd:CI_ResponsibleParty> <gmd:individualName> ... </gmd:individualName> <gmd:organisationName> ... </gmd:organisationName> <gmd:positionName> ... </gmd:positionName> <gmd:contactInfo> ... </gmd:contactInfo> <gmd:role> ... </gmd:role> </gmd:CI_ResponsibleParty> ... </pre>

Responsible Party Individual Name

Name (Number)	individualName (375) UML
Short Name	rpIndName
Definition	name of the responsible person - surname, given name, title separated by a delimiter
Obligation/Condition	Conditional: mandatory if organisationName and positionName not documented
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose The name of the individual responsible for the resource.

Guidance The format of the value of this element should be family name, given name, title separated by the same single delimiter (e.g. space).

Example

Explanation	The following XML example shows the name of the individual responsible for the resource in context.
Value	Mr John Brown
XML	<pre> ... <gmd:CI_ResponsibleParty> <gmd:individualName> <gco:CharacterString>Brown John Mr</gco:CharacterString> </gmd:individualName> ... </gmd:CI_ResponsibleParty> ... </pre>

Responsible Party Organisation Name

Name (Number)	organisationName (376) UML
Short Name	rpOrgName
Definition	name of the responsible organization
Obligation/Condition	Conditional: mandatory if individualName and positionName not documented
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free Text

Meaning & Purpose The name of the organisation responsible for the resource.

Guidance Organisation name is always given in full. Addition of the acronym or abbreviation could be useful. For government, the value is the name of the agency responsible for a particular role associated with the resource.

Example

Explanation	The following XML example shows the organisation name of the responsible party in context.
Value	Land Information New Zealand (LINZ)
XML	<pre> ... <gmd:CI_ResponsibleParty> ... <gmd:organisationName> <gco:CharacterString>Land Information New Zealand (LINZ) </gco:CharacterString> </gmd:organisationName> ... </gmd:CI_ResponsibleParty> ... </pre>

Responsible Party Position Name

Name (Number)	positionName (377) [UML]
Short Name	rpPosName
Definition	role or position of the responsible person
Obligation/Condition	Conditional; mandatory if individualName and organisationName not documented
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text.

Meaning & Purpose The name of the position responsible for the resource.

Guidance Position name given in full (no abbreviations).

Example

Explanation	The following XML example shows the position name in context
Value	Surveyor General
XML	<pre> <gmd:CI_ResponsibleParty> ... <gmd:positionName> <gco:CharacterString>Surveyor General </gco:CharacterString> </gmd:positionName> ... </gmd:CI_ResponsibleParty> ... </pre>

Responsible Party Contact Information

Name (Number)	contactInfo (378) [UML]
Short Name	rpCntInfo
Definition	address of the responsible party
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	CI_Contact <<DataType>>

Meaning & Purpose

Guidance

Example

Role

Name (Number)	role (379) [UML]
Short Name	role
Definition	function performed by the responsible party
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	CI_RoleCode <<CodeList>>

Meaning & Purpose The role identifies the function that the individual, position and/or organisation performs in regards to the resource.

Guidance The value of role is chosen from the controlled list [CI_RoleCode](#). Note this code list is extensible.

Example

7.14.2 Address Information

Address

Name (Number)	CI_Address (380) [UML]
Short Name	Address
Definition	location of the responsible individual or organization
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use Maximum Occurrence from referencing object
Data Type	Class <<DataType>>
Domain	Lines 381-386

Meaning & Purpose

Guidance

Example

Delivery Point

Name (Number)	deliveryPoint (381) [UML]
Short Name	delPoint
Definition	address line for the location (as described in ISO 11180, Annex A)
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

City

Name (Number)	city (382) [UML]
Short Name	city
Definition	city of the location
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Administrative Area

Name (Number)	administrativeArea (383) [UML]
Short Name	adminArea
Definition	state, province of the location
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Postcode

Name (Number)	postalCode (384) [UML]
Short Name	postCode
Definition	ZIP or other postal code
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Character tring
Domain	Free text

Meaning & Purpose

Guidance

Example

Country

Name (Number)	country (385) [UML]
Short Name	country
Definition	country of the physical address
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Email Address

Name (Number)	electronicMailAddress (386) [UML]
Short Name	eMailAdd
Definition	address of the electronic mailbox of the responsible organization or individual
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

7.14. 3 Contact Information**Contact**

Name (Number)	CI_Contact (387) [UML]
Short Name	Contact
Definition	information required to enable contact with the responsible person and/or organization
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class <<DataType>>
Domain	Lines 388-392

Meaning & Purpose

Guidance

Example

Contact Phone

Name (Number)	phone (388) [UML]
Short Name	cntPhone
Definition	telephone numbers at which the organization or individual may be contacted
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	CI_Telephone <<DataType>>

Meaning & Purpose

Guidance

Example

Contact Address

Name (Number)	address (389) [UML]
Short Name	cntAddress
Definition	physical and email address which the organization or may be contacted
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	CI_Address <<DataType>>

Meaning & Purpose

Guidance

Example

Contact Online Resource

Name (Number)	onlineResource (390) [UML]
Short Name	cntOnlineRes
Definition	on-line information that can be used to contact the individual or organization
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	CI_OnlineResource <<DataType>>

Meaning & Purpose

Guidance

Example

Contact Hours

Name (Number)	hoursOfService (391) [UML]
Short Name	cntHours
Definition	time period (including time zone) when individuals can contact the organization or individual
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Contact Instructions

Name (Number)	contactInstructions (392) [UML]
Short Name	cntInstr
Definition	supplemental instructions on how or when to contact the individual or organization
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

7.14. 4 Date Information**Date Reference**

Name (Number)	CI_Date (393) [UML]
Short Name	DateRef
Definition	reference date and event used to describe it
Obligation/ Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class <<Data Type>>
Domain	Lines 394-395

Meaning & Purpose The date reference contains the date and the type of event (creation, publication or revision) to which the date relates.

Guidance This contains no specific value in its own right.

Example

Explanation	The following XML example shows a generic container for dates in context.
Value	
XML	<pre> ... <gmd:date> <gmd:CI_Date> <gmd:date> ... </gmd:date> <gmd:dateType> ... </gmd:dateType> </gmd:CI_Date> </gmd:date> ... </pre>

Reference Date

Name (Number)	date (394) [UML]
Short Name	refDate
Definition	reference date for the cited resource
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	Date

Meaning & Purpose The reference date is the date that an event occurs.

Guidance Character encoding of a date is a string that conforms to the date format specified by ISO 8601: "YYYY-MM-DD", "YYYYMMDD", "YYYY-MM", "YYYY" and "YY" where Y, M and D are integer values representing the year, month and day respectively.

For other date and date/time formats, refer to Section: Externally Referenced Entities, '[Date and Date/Time](#)' .

Example

Explanation	The following XML example shows the date in context.
Value	2007-03-31
XML	<pre> ... <gmd:date> <gmd:CI_Date> <gmd:date> <gco:Date>2007-03-31</gco:Date> </gmd:date> </gmd:CI_Date> </gmd:date> ... </pre>

Reference Date Type

Name (Number)	dateType (395) [UML]
Short Name	refDateType
Definition	event used for reference date
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	CI_DateTypeCode <<CodeList>>

Meaning & Purpose The reference date type identifies the event that the date relates to.

Guidance The value of dateType is chosen from the controlled list [CI_DateTypeCode](#). Note this code list is extensible.

Example 1

Explanation	The following XML example shows the date type in context.
Value	Creation
XML	<pre> ... <gmd:date> <gmd:CI_Date> ... <gmd:dateType> <gmd:CI_DateTypeCode codeList= http://asdd.ga.gov.au/asdd/profileinfo/gmxCodelists.xml#CI_DateT ypeCode codeListValue="creation" / </gmd:dateType> </gmd:CI_Date> </gmd:date> ... </pre>

Example 2

Explanation	The following XML example shows the date type in context.
Value	publication
XML	<pre> ... <gmd:date> <gmd:CI_Date> ... <gmd:dateType> <gmd:CI_DateTypeCode codeList= http://asdd.ga.gov.au/asdd/profileinfo/gmxCodelists.xml#CI_DateT ypeCode codeListValue="publication" /> </gmd:dateType> </gmd:CI_Date> </gmd:date> ... </pre>

Example 3

Explanation	The following XML example shows the date type in context.
Value	revision
XML	<pre> ... <gmd:date> <gmd:CI_Date> ... <gmd:dateType> <gmd:CI_DateTypeCode codeList= http://asdd.qa.gov.au/asdd/profileinfo/gmxCodelists.xml#CI_DateTypeCode codeListValue="revision"> revision</gmd:CI_DateTypeCode> </gmd:dateType> </gmd:CI_Date> </gmd:date> ... </pre>

7.14. 5 OnLine Resource Information

Online Resource

Name (Number)	CI_OnlineResource (396) [UML]
Short Name	OnlineRes
Definition	information about on-line sources from which the dataset, specification, or community profile name and extended metadata elements can be obtained
Obligation/Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class <<DataType>>
Domain	Lines 397-402

Meaning & Purpose	<p>The online resource identifies information about resources that are available online; including the URL, and optionally protocol, application profile, name, description and its function.</p> <p>Exists to support its children elements and does not contain values in its own right.</p>
Guidance	The metadata element content creator is not required to record any information against this element.
Example	

Explanation	The following XML example shows the online resource in context.
Value	refer to bold text in XML example below
XML	<pre> ... <gmd:CI_OnlineResource> <gmd:linkage> <gmd:URL> http://adl.brs.gov.au/AWDI/codeLists/NR_SiteTypeCodes.xml </gmd:URL> </gmd:linkage> <gmd:protocol> <gco:CharacterString>HTTP</gco:CharacterString> </gmd:protocol> <gmd:name> <gco:CharacterString>Australian Water Data Infrastructure - Natural Resources Observation Site Type Code Register (XML uncompressed)</gco:CharacterString> </gmd:name> <gmd:description> <gco:CharacterString>Codes and definition of the types of sites that can be used when making observations of Natural Resource Features. These Site Types are specifically defined for use within the Australian Water Data Infrastructure (WFS and off-line). The codes are in XML format conforming to GMX Codelist Catalogue Definition Standard</gco:CharacterString> </gmd:description> <gmd:function> <gmd:CI_OnLineFunctionCode codeList=" http://asdd.ga.gov.au/asdd/profileinfo/gmxCodelists.xml#CI_OnLineFunctionCode" codeListValue="information" /> </gmd:CI_OnlineResource> ... </pre>

Linkage

Name (Number)	linkage (397) UML
Short Name	linkage
Definition	location (address) for on-line access using a Uniform Resource Locator address or similar addressing scheme such as http://www.statkart.no/isotc211
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	Class
Domain	URL (IETF RFC1738, IETF RFC 2056)

Meaning & Purpose This element allows the enquirer to access the cited resource.

Must refer to a valid URL address.

Guidance

URLs refer to the subset of URI s that, in addition to identifying a resource, provide a means of locating the resource by describing its primary access mechanism (e.g., its network "location")

Hence, URL encoding should conform to URI encoding and follow the format specified by the Internet Society document "Uniform Resource Identifier (URI): Generic Syntax" (2005) - RFC 3986, STD 66.

Example

Explanation	The following XML example shows the linkage element (a URL of an index of metadata records) in context
Value	<code>http://adl.brs.gov.au/AWDI/metadata/index.html</code>
XML	<pre> ... <gmd:CI_OnlineResource> <gmd:linkage> <gmd:URL> http://adl.brs.gov.au/AWDI/metadata/index.html </gmd:URL> </gmd:linkage> ... </gmd:CI_OnlineResource> ... </pre>

Protocol

Name (Number)	protocol (398) [UML]
Short Name	protocol
Definition	connection protocol to be used
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free Text

Meaning & Purpose

Guidance

Example

Explanation	The following XML example shows the protocol in context.
Value	HTTP
XML	<pre> ... <gmd:CI_OnlineResource> ... <gmd:protocol> <gco:CharacterString>HTTP</gco:CharacterString> </gmd:protocol> ... </gmd:CI_OnlineResource> ... </pre>

Application Profile

Name (Number)	applicationProfile (399) [UML]
Short Name	appProfile
Definition	name of an application profile that can be used with the online resource
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free Text

Meaning & Purpose

Guidance

Example

Online Resource Name

Name (Number)	name (400) [UML]
Short Name	orName
Definition	name of the online resource
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free Text

Meaning & Purpose

Guidance

Example

Explanation	The following XML example shows the Online Resource Name in context.
Value	Australian Water Data Infrastructure - Natural Resources Observation Site Type Code Register (XML uncompressed)
XML	<pre>... <gmd:CI_OnlineResource> ... <gmd:name> <gco:CharacterString>Australian Water Data Infrastructure - Natural Resources Observation Site Type Code Register (XML uncompressed)</gco:CharacterString> </gmd:name> ... </gmd:CI_OnlineResource> ...</pre>

Online Resource Description

Name (Number)	description (401) [UML]
Short Name	orDesc
Definition	detailed text description of what the online resource is/does
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Explanation	The following XML example shows the online resource description in context.
Value	Codes and definition of the types of sites that can be used when making observations of Natural Resource Features. These Site Types are specifically defined for use within the Australian Water Data Infrastructure (WFS and off-line). The codes are in XML format conforming to GMX Codelist Catalogue Definition Standard.
XML	<pre> ... <gmd:CI_OnlineResource> ... <gmd:description> <gco:CharacterString>Codes and definition of the types of sites that can be used when making observations of Natural Resource Features. These Site Types are specifically defined for use within the Australian Water Data Infrastructure (WFS and off-line). The codes are in XML format conforming to GMX Codelist Catalogue Definition Standard</gco:CharacterString> </gmd:description> ... </gmd:CI_OnlineResource> ... </pre>

Online Resource Function

Name (Number)	function (402) [UML]
Short Name	orFunct
Definition	code for function performed by the online resource
Obligation/Condition	Optional
Maximum Occurrence	1
Data Type	Class
Domain	CI_OnlineFunctionCode <<CodeList>>

Meaning & Purpose

Guidance

Example

Explanation	The following XML example shows the online resource function in context.
Value	refer to bold text in XML example below
XML	<pre> ... <gmd:CI_OnlineResource> ... <gmd:function> <gmd:CI_OnLineFunctionCode codeList=" http://asdd.ga.gov.au/asdd/profileinfo/gmxCodelists.xml#CI_OnLineFunctionCode " codeListValue="information"/> </gmd:function> </gmd:CI_OnlineResource> ... </pre>

Dataset Series

Name (Number)	CI_Series (403) [UML]
Short Name	DatasetSeries
Definition	information about the series, or aggregate dataset, to which a dataset belongs
Obligation/Condition	Use obligation/condition from referencing object
Maximum Occurrence	Use maximum occurrence from referencing object
Data Type	Class <<DataType>>
Domain	Lines 404-406

Meaning & Purpose

Guidance

Example

Series Name

Name (Number)	name (404) [UML]
Short Name	seriesName
Definition	name of the series, or aggregate dataset, of which the dataset is a part
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Issue Identification

Name (Number)	issueIdentification (405) [UML]
Short Name	issId
Definition	information identifying the issue of the series
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

Article Page

Name (Number)	page (406) [UML]
Short Name	artPage
Definition	details on which pages of the publication the article was published
Obligation/ Condition	Optional
Maximum Occurrence	1
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

7.14. 6 Telephone Information

Telephone

Name (Number)	CI_Telephone (407) [UML]
Short Name	Telephone
Definition	telephone numbers for contacting the responsible individual or organization
Obligation/ Condition	Use obligation/condition from referencing object.
Maximum Occurrence	Use maximum occurrence from referencing object.
Data Type	Class <<DataType>>
Domain	Lines 408-409

Meaning & Purpose

Guidance

Example

Voice Number

Name (Number)	voice (408) [UML]
Short Name	voiceNum
Definition	telephone number by which individuals can speak to the responsible organization or individual
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	CharacterString
Domain	Free Text

Meaning & Purpose

Guidance

Example

Fax Number

Name (Number)	facsimile (409) [UML]
Short Name	faxNum
Definition	telephone number of a facsimile machine for the responsible organization or individual
Obligation/ Condition	Optional
Maximum Occurrence	No maximum
Data Type	CharacterString
Domain	Free text

Meaning & Purpose

Guidance

Example

7.15 Externally Referenced Entities

There are several entities referenced by this profile that are documented in other standards. Those externally referenced entities are explained below.

7.15.1 Date and Date/Time

Date

Date: Gives values for year, month and day. Character encoding of a date is a string which shall follow the format for the date specified by AS ISO 8601-2007. This class is documented in full in AS/NZS 19103:2006.

Character encoding of a date is a string which shall follow the format for date specified by ISO 8601: "YYYY-MM-DD", "YYYYMMDD", "YYYY-MM", "YYYY" and "YY" where Y, M and D are integer values representing the year, month and day respectively.

Date/Time

Combination of a date and time type (given by an hour, minute and second). Character encoding of a DateTime shall follow AS ISO 8601-2007. This class is documented in full in AS/NZS 19103:2006.

Date Formats

Century	YY
Year	YYYY
Year and month	YYYY-MM
Complete date	YYYY-MM-DD
Complete date and time	YYYY-MM-DDThh:mm:ss
Periods of Time when start and end dates are known:	YYYY-MM-DD/YYYY-MM-DD

Abbreviations used above are:

YY	first two digits of four-digit year representing the century
YYYY	four-digit year
MM	two-digit month (01=January, etc.)
DD	two-digit day of month (01 through 31)
hh	24 hour clock hour time (00 through 23)
mm	24 hour clock minute time (00 through 59)
ss	24 hour clock second time (00 through 59)

Note

- (i) short dash (-) separates the date elements
- (ii) "T" appears literally in the string, to indicate the beginning of the Time element
- (iii) colon (:) separates the time elements

Examples

19	20th Century
1997	1997
1997-07	July 1997
1997-07-16	16 July 1997
1997-07-16/1997-08-17	From 16 July 1997 to 17 August 1997
2002-12-01T16:15:00	4.15pm 1 December 2002

7.15.2 Time Period

Name (Number)	TimePeriod (gml) UML
Short Name	Tm_Period
Definition	A period is a one-dimensional geometric primitive that represents an identifiable extent in time (it is equivalent to a curve or envelope in space). It is an open interval bounded by beginning and end points (i.e. instants), and has length (i.e. duration). Its location in time is described by the temporal positions of the instants at which it begins and ends. The length of the period is equal to the temporal distance between the two bounding temporal positions.
Obligation/Condition	Use maximum occurrence from referencing object
Maximum Occurrence	1
Data Type	[****]
Domain	AS ISO 8601-2007

Meaning & Purpose To provide a structure constructs for the description of time, and for the representation of time dependent geographic features ranging, for example, from the motion of a person or vehicle, to the development of a hurricane and the impact zone of an earthquake.

Guidance

Example

Beginning Time

Name (Number)	beginPosition (gml) UML
Short Name	
Definition	beginning date/time for the defined element
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	DateTime
Domain	AS ISO 8601-2007

Meaning & Purpose Direct representation of a temporal position. Indeterminate time values are also allowed, as described in AS/NZS 19108:2003. The indeterminatePosition attribute can be used alone or it can qualify a specific value for temporal position (e.g. before 2002-12, after 1019624400).

For time values that identify position within a calendar, the calendarEraName attribute provides the name of the calendar era to which the date is

referenced (e.g. the Meiji era of the Japanese calendar).

Guidance

Example

Ending Time

Name (Number)	endPosition (gml) UML
Short Name	
Definition	end date for the defined element
Obligation/Condition	Mandatory
Maximum Occurrence	1
Data Type	DateTime
Domain	AS ISO 8601-2007

Meaning & Purpose Direct representation of a temporal position. Indeterminate time values are also allowed, as described in AS/NZS 19108:2003. The indeterminatePosition attribute can be used alone or it can qualify a specific value for temporal position (e.g. before 2002-12, after 1019624400).

For time values that identify position within a calendar, the calendarEraName attribute provides the name of the calendar era to which the date is referenced (e.g. the Meiji era of the Japanese calendar).

Guidance

Example

7.16 Code lists and Enumerations

The content of many elements are available from enumerated or code lists. *Enumerations* are closed (not extendable) and *CodeLists* are extendable. The following code lists and enumerated lists are extracted from the AS/NZS ISO 19115 standard.

Note:

- ANZLIC Code lists may be extended, for the latest check the ANZLIC website: www.anzlic.org.au. Should other organisations choose to independently extend the codelists, they must be extended according to AS/NZS ISO 19115:2005 and ISO 19139:2007, should be registered with ANZLIC and

made available via the web.

- ANZLIC does not currently have a AS/NZS ISO/TS 19135:2006 compliant registration system.

7.16. 1 CI_DateTypeCode <<CodeList>>

	Name	Domain code	Definition
1.	CI_DateTypeCode	DateTypCd	identification of when a given event occurred
2.	creation	001	date identifies when the resource was brought into existence
3.	publication	002	date identifies when the resource was issued
4.	revision	003	date identifies when the resource was examined or re-examined and improved or amended

7.16. 2 CI_OnLineFunctionCode <<CodeList>>

	Name	Domain code	Definition
1.	CI_OnLineFunctionCode	OnFunctCd	function performed by the resource
2.	download	001	online instructions for transferring data from one storage device or system to another
3.	information	002	online information about the resource
4.	offlineAccess	003	online instructions for requesting the resource from the provider
5.	order	004	online order process for obtaining the resource
6.	search	005	online search interface for seeking out information about the resource

7.16. 3 CI_PresentationFormCode <<CodeList>>

	Name	Domain code	Definition
1.	CI_PresentationFormCode	PresFormCd	mode in which the data is represented
2.	documentDigital	001	digital representation of a primarily textual item (can contain illustrations also)
3.	imageDigital	002	representation of a primarily textual item (can contain illustrations also) on paper, photographic material, or other media
4.	documentHardcopy	003	likeness of natural or man-made features, objects, and activities acquired through the sensing of visual or any other segment of the electromagnetic spectrum by sensors, such as thermal infrared, and high resolution radar and stored in digital format
5.	imageHardcopy	004	likeness of natural or man-made features, objects, and activities

	Name	Domain code	Definition
			acquired through the sensing of visual or any other segment of the electromagnetic spectrum by sensors, such as thermal infrared, and high resolution radar and reproduced on paper, photographic material, or other media for use directly by the human user
6.	mapDigital	005	map represented in raster or vector form
7.	mapHardcopy	006	map printed on paper, photographic material, or other media for use directly by the human user
8.	modelDigital	007	multi-dimensional digital representation of a feature, process, etc.
9.	modelHardcopy	008	3-dimensional, physical model
10.	profileDigital	009	vertical cross-section in digital form
11.	profileHardcopy	010	vertical cross-section printed on paper, etc.
12.	tableDigital	011	digital representation of facts or figures systematically displayed, especially in columns
13.	tableHardcopy	012	representation of facts or figures systematically displayed, especially in columns, printed on paper, photographic material, or other media
14.	videoDigital	013	digital video recording
15.	videoHardcopy	014	video recording on film

7.16. 4 CI_RoleCode <<CodeList>>

	Name	Domain code	Definition
1.	CI_RoleCode	RoleCd	function performed by the responsible party
2.	resourceProvider	001	party that supplies the resource
3.	custodian	002	party that accepts accountability and responsibility for the data and ensures appropriate care and maintenance of the resource
4.	owner	003	party that owns the resource
5.	user	004	party who uses the resource
6.	distributor	005	party who distributes the resource
7.	originator	006	party who created the resource
8.	pointOfContact	007	party who can be contacted for acquiring knowledge about or acquisition of the resource
9.	principalInvestigator	008	key party responsible for gathering information and conducting research
10.	processor	009	party who has processed the data in a manner such that the resource has been modified

	Name	Domain code	Definition
11.	publisher	010	party who published the resource
12.	author	011	party who authored the resource

7.16. 5 DQ_EvaluationMethodTypeCode <<CodeList>>

	Name	Domain code	Definition
1.	DQ_EvaluationMethodTypeCode	EvalMethTypeCd	type of method for evaluating an identified data quality measure
2.	directInternal	001	method of evaluating the quality of a dataset based on inspection of items within the dataset, where all data required is internal to the dataset being evaluated
3.	directExternal	002	method of evaluating the quality of a dataset based on inspection of items within the dataset, where reference data external to the dataset being evaluated is required
4.	indirect	003	method of evaluating the quality of a dataset based on external knowledge

7.16. 6 DS_AssociationTypeCode <<CodeList>>

	Name	Domain code	Definition
1.	DS_AssociationTypeCode	AscTypeCd	justification for the correlation of two datasets
2.	crossReference	001	reference from one dataset to another
3.	largerWorkCitation	002	reference to a master dataset of which this one is a part
4.	partOfSeamlessDatabase	003	part of same structured set of data held in a computer
5.	source	004	mapping and charting information from which the dataset content originates
6.	stereoMate	005	part of a set of imagery that when used together, provides three-dimensional images

7.16. 7 DS_InitiativeTypeCode <<CodeList>>

	Name	Domain code	Definition
1.	DS_InitiativeTypeCode	InitTypCd	type of aggregation activity in which datasets are related

	Name	Domain code	Definition
2.	campaign	001	series of organized planned actions
3.	collection	002	accumulation of datasets assembled for a specific purpose
4.	exercise	003	specific performance of a function or group of functions
5.	experiment	004	process designed to find if something is effective or valid
6.	investigation	005	search or systematic inquiry
7.	mission	006	specific operation of a data collection system
8.	sensor	007	device or piece of equipment which detects or records
9.	operation	008	action that is part of a series of actions
10.	platform	009	vehicle or other support base that holds a sensor
11.	process	010	method of doing something involving a number of steps
12.	program	011	specific planned activity
13.	project	012	organized undertaking, research, or development
14.	study	013	examination or investigation
15.	task	014	piece of work
16.	trial	015	process of testing to discover or demonstrate something

7.16. 8 MD_CellGeometryCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_CellGeometryCode	CellGeoCd	code indicating whether grid data is point or area
2.	point	001	each cell represents a point
3.	area	002	each cell represents an area

7.16. 9 MD_CharacterSetCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_CharacterSetCode	CharSetCd	name of the character coding standard used for the resource
2.	ucs2	001	16-bit fixed size Universal Character Set, based on ISO/IEC 10646
3.	ucs4	002	32-bit fixed size Universal Character Set, based on ISO/IEC 10646
4.	utf7	003	7-bit variable size UCS Transfer Format, based on ISO/IEC 10646
5.	utf8	004	8-bit variable size UCS Transfer Format, based on ISO/

	Name	Domain code	Definition
			IEC 10646
6.	utf16	005	16-bit variable size UCS Transfer Format, based on ISO/IEC 10646
7.	8859part1	006	ISO/IEC 8859-1, Information technology - 8-bit single-byte coded graphic character sets - Part 1: Latin alphabet No. 1
8.	8859part2	007	ISO/IEC 8859-2, Information technology - 8-bit single-byte coded graphic character sets - Part 2: Latin alphabet No. 2
9.	8859part3	008	ISO/IEC 8859-3, Information technology - 8-bit single-byte coded graphic character sets - Part 3: Latin alphabet No. 3
10.	8859part4	009	ISO/IEC 8859-4, Information technology - 8-bit single-byte coded graphic character sets - Part 4: Latin alphabet No. 4
11.	8859part5	010	ISO/IEC 8859-5, Information technology - 8-bit single-byte coded graphic character sets - Part 5: Latin/Cyrillic alphabet
12.	8859part6	011	ISO/IEC 8859-6, Information technology - 8-bit single-byte coded graphic character sets - Part 6: Latin/Arabic alphabet
13.	8859part7	012	ISO/IEC 8859-7, Information technology - 8-bit single-byte coded graphic character sets - Part 7: Latin/Greek alphabet
14.	8859part8	013	ISO/IEC 8859-8, Information technology - 8-bit single-byte coded graphic character sets - Part 8: Latin/Hebrew alphabet
15.	8859part9	014	ISO/IEC 8859-9, Information technology - 8-bit single-byte coded graphic character sets - Part 9: Latin alphabet No. 5
16.	8859part10	015	ISO/IEC 8859-10, Information technology - 8-bit single-byte coded graphic character sets - Part 10: Latin alphabet No. 6
17.	8859part11	016	ISO/IEC 8859-11, Information technology - 8-bit single-byte coded graphic character sets - Part 11: Latin/Thai alphabet
18.	(reserved for future use)	017	a future ISO/IEC 8-bit single-byte coded graphic character set (e.g. possibly ISO/IEC 8859-12)
19.	8859part13	018	ISO/IEC 8859-13, Information technology - 8-bit single-byte coded graphic character sets - Part 13: Latin alphabet No. 7

	Name	Domain code	Definition
20.	8859part14	019	ISO/IEC 8859-14, Information technology - 8-bit single-byte coded graphic character sets - Part 14: Latin alphabet No. 8 (Celtic)
21.	8859part15	020	ISO/IEC 8859-15, Information technology - 8-bit single-byte coded graphic character sets - Part 15: Latin alphabet No. 9
22.	8859part16	021	ISO/IEC 8859-16, Information technology - 8-bit single-byte coded graphic character sets - Part 16: Latin alphabet No. 10
23.	jis	022	japanese code set used for electronic transmission
24.	shiftJIS	023	japanese code set used on MS-DOS based machines
25.	eucJP	024	japanese code set used on UNIX based machines
26.	usAscii	025	united states ASCII code set (ISO 646 US)
27.	ebcdic	026	ibm mainframe code set
28.	eucKR	027	korean code set
29.	big5	028	traditional Chinese code set used in Taiwan, Hong Kong of China and other areas
30.	GB2312	029	simplified Chinese code set

7.16. 10 MD_ClassificationCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_ClassificationCode	ClasscationCd	name of the handling restrictions on the dataset
2.	unclassified	001	available for general disclosure
3.	restricted	002	not for general disclosure
4.	confidential	003	available for someone who can be entrusted with information (protected)
5.	secret	004	kept or meant to be kept private, unknown, or hidden from all but a select group of people (highly protected)
6.	topSecret	005	of the highest secrecy

7.16. 11 MD_CoverageContentTypeCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_CoverageContentTypeCode	ContentTypCd	specific type of information represented in the cell
2.	image	001	meaningful numerical representation of a physical parameter that is not the actual value of the physical parameter
3.	thematicClassification	002	code value with no quantitative meaning, used to represent a physical quantity
4.	physicalMeasurement	003	value in physical units of the quantity being measured

7.16. 12 MD_DatatypeCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_DatatypeCode	DatatypeCd	datatype of element or entity
2.	class	001	descriptor of a set of objects that share the same attributes, operations, methods, relationships, and behavior
3.	codelist	002	flexible enumeration useful for expressing a long list of values, can be extended
4.	enumeration	003	data type whose instances form a list of named literal values, not extendable
5.	codelistElement	004	permissible value for a codelist or enumeration
6.	abstractClass	005	class that cannot be directly instantiated
7.	aggregateClass	006	class that is composed of classes it is connected to by an aggregate relationship
8.	specifiedClass	007	subclass that may be substituted for its superclass
9.	datatypeClass	008	class with few or no operations whose primary purpose is to hold the abstract state of another class for transmittal, storage, encoding or persistent storage
10.	interfaceClass	009	named set of operations that characterize the behavior of an element
11.	unionClass	010	class describing a selection of one of the specified types
12.	metaClass	011	class whose instances are classes
13.	typeClass	012	class used for specification of a domain of instances (objects), together with the operations applicable to the objects. A type may have attributes and associations
14.	characterString	013	free text field
15.	integer	014	numerical field
16.	association	015	semantic relationship between two classes that involves connections among their instances

7.16. 13 MD_DimensionNameTypeCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_DimensionNameTypeCode	DimNameTypCd	name of the dimension
2.	row	001	ordinate (y) axis
3.	column	002	abscissa (x) axis
4.	vertical	003	vertical (z) axis
5.	track	004	along the direction of motion of the scan point
6.	crossTrack	005	perpendicular to the direction of motion of the scan point
7.	line	006	scan line of a sensor
8.	sample	007	element along a scan line
9.	time	008	duration

7.16. 14 MD_GeometricObjectTypeCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_GeometricObjectTypeCode	GeoObjTypCd	name of point or vector objects used to locate zero-, one-, and two-, or three- dimensional spatial locations in the dataset
2.	complex	001	set of geometric primitives such that their boundaries can be represented as a union of other primitives
3.	composite	002	connected set of curves, solids or surfaces
4.	curve	003	bounded, 1-dimensional geometric primitive, representing the continuous image of a line
5.	point	004	zero-dimensional geometric primitive, representing a position but not having an extent
6.	solid	005	bounded, connected 3-dimensional geometric primitive, representing the continuous image of a region of space
7.	surface	006	bounded, connected 2-dimensional geometric representing the continuous image of a region of a plane

7.16. 15 MD_ImagingConditionCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_ImagingConditionCode	ImgCondCd	code which indicates conditions which may affect the image
2.	blurredImage	001	portion of the image is blurred
3.	cloud	002	portion of the image is partially obscured by cloud cover
4.	degradingObliquity	003	acute angle between the plane of the ecliptic (the plane of

	Name	Domain code	Definition
			the Earth's orbit) and the plane of the celestial equator
5.	fog	004	portion of the image is partially obscured by fog
6.	heavySmokeOrDust	005	portion of the image is partially obscured by heavy smoke or dust
7.	night	006	image was taken at night
8.	rain	007	image was taken during rainfall
9.	semiDarkness	008	image was taken during semi-dark conditions—twilight conditions
10.	shadow	009	portion of the image is obscured by shadow
11.	snow	010	portion of the image is obscured by snow
12.	terrainMasking	011	the absence of collection data of a given point or area caused by the relative location of topographic features which obstruct the collection path between the collector(s) and the subject(s) of interest

7.16. 16 MD_KeywordTypeCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_KeywordTypeCode	KeyTypCd	methods used to group similar keywords
2.	discipline	001	keyword identifies a branch of instruction or specialized learning
3.	place	002	keyword identifies a location
4.	stratum	003	keyword identifies the layer(s) of any deposited substance
5.	temporal	004	keyword identifies a time period related to the dataset
6.	theme	005	keyword identifies a particular subject or topic

7.16. 17 MD_MaintenanceFrequencyCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_MaintenanceFrequencyCode	MaintFreqCd	frequency with which modifications and deletions are made to the data after it is first produced
2.	continual	001	data is repeatedly and frequently updated
3.	daily	002	data is updated each day
4.	weekly	003	data is updated on a weekly basis
5.	fortnightly	004	data is updated every two weeks
6.	monthly	005	data is updated each month
7.	quarterly	006	data is updated every three months
8.	biannually	007	data is updated twice each year

	Name	Domain code	Definition
9.	annually	008	data is updated every year
10.	asNeeded	009	data is updated as deemed necessary
11.	irregular	010	data is updated in intervals that are uneven in duration
12.	notPlanned	011	there are no plans to update the data
13.	unknown	012	frequency of maintenance for the data is not known

7.16. 18 MD_MediumFormatCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_MediumFormatCode	MedFormCd	method used to write to the medium
2.	cpio	001	CoPy In / Out (UNIX file format and command)
3.	tar	002	Tape ARchive
4.	highSierra	003	high sierra file system
5.	iso9660	004	information processing volume and file structure of CD-ROM
6.	iso9660RockRidge	005	rock ridge interchange protocol (UNIX)
7.	iso9660AppleHFS	006	hierarchical file system (Macintosh)

7.16. 19 MD_MediumNameCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_MediumNameCode	MedNameCd	name of the medium
2.	cdRom	001	read-only optical disk
3.	dvd	002	digital versatile disk
4.	dvdRom	003	digital versatile disk, read only
5.	3halfInchFloppy	004	3,5 inch magnetic disk
6.	5quarterInchFloppy	005	5,25 inch magnetic disk
7.	7trackTape	006	7 track magnetic tape
8.	9trackTape	007	9 track magnetic tape
9.	3480Cartridge	008	3480 cartridge tape drive
10.	3490Cartridge	009	3490 cartridge tape drive
11.	3580Cartridge	010	3580 cartridge tape drive
12.	4mmCartridgeTape	011	4 millimetre magnetic tape
13.	8mmCartridgeTape	012	8 millimetre magnetic tape
14.	1quarterInchCartridgeTape	013	0,25 inch magnetic tape

	Name	Domain code	Definition
15.	digitalLinearTape	014	half inch cartridge streaming tape drive
16.	onLine	015	direct computer linkage
17.	satellite	016	linkage through a satellite communication system
18.	telephoneLink	017	communication through a telephone network
19.	hardcopy	018	pamphlet or leaflet giving descriptive information

7.16. 20 MD_ObligationCode <<Enumeration>>

	Name	Domain code	Definition
1.	MD_ObligationCode	ObCd	obligation of the element or entity
2.	mandatory	001	element is always required
3.	optional	002	element is not required
4.	conditional	003	element is required when specific a specific condition is met

7.16. 21 MD_PixelOrientationCode <<Enumeration>>

	Name	Domain code	Definition
1.	MD_PixelOrientationCode	PixOrientCd	point in a pixel corresponding to the Earth location of the pixel
2.	center	001	point halfway between the lower left and the upper right of the pixel
3.	lowerLeft	002	the corner in the pixel closest to the origin of the SRS; if two are at the same distance from the origin, the one with the smallest x-value
4.	lowerRight	003	next corner counterclockwise from the lower left
5.	upperRight	004	next corner counterclockwise from the lower right
6.	upperLeft	005	next corner counterclockwise from the upper right

7.16. 22 MD_ProgressCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_ProgressCode	ProgCd	status of the dataset or progress of a review
2.	completed	001	production of the data has been completed
3.	historicalArchive	002	data has been stored in an offline storage facility
4.	obsolete	003	data is no longer relevant
5.	onGoing	004	data is continually being updated

	Name	Domain code	Definition
6.	planned	005	fixed date has been established upon or by which the data will be created or updated
7.	required	006	data needs to be generated or updated
8.	underDevelopment	007	data is currently in the process of being created

7.16. 23 MD_RestrictionCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_RestrictionCode	RestrictCd	limitation(s) placed upon the access or use of the data
2.	copyright	001	exclusive right to the publication, production, or sale of the rights to a literary, dramatic, musical, or artistic work, or to the use of a commercial print or label, granted by law for a specified period of time to an author, composer, artist, distributor
3.	patent	002	government has granted exclusive right to make, sell, use or license an invention or discovery
4.	patentPending	003	produced or sold information awaiting a patent
5.	trademark	004	a name, symbol, or other device identifying a product, officially registered and legally restricted to the use of the owner or manufacturer
6.	license	005	formal permission to do something
7.	intellectualPropertyRights	006	rights to financial benefit from and control of distribution of non-tangible property that is a result of creativity
8.	restricted	007	withheld from general circulation or disclosure
9.	otherRestrictions	008	limitation not listed

7.16. 24 MD_ScopeCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_ScopeCode	ScopeCd	class of information to which the referencing entity applies
2.	attribute	001	information applies to the attribute class {deleted "value"}
3.	attributeType	002	information applies to the characteristic of a feature
4.	collectionHardware	003	information applies to the collection hardware class
5.	collectionSession	004	information applies to the collection session

	Name	Domain code	Definition
6.	dataset	005	information applies to the dataset
7.	series	006	information applies to the series {delete - "Note: "series" applies to any DS_Aggregate."}
8.	nonGeographicDataset	007	information applies to non-geographic data
9.	dimensionGroup	008	information applies to a dimension group
10.	feature	009	information applies to a feature
11.	featureType	010	information applies to a feature type
12.	propertyType	011	information applies to a property type
13.	fieldSession	012	information applies to a field session
14.	software	013	information applies to a computer program or routine
15.	service	014	information applies to a capability which a service provider entity makes available to a service user entity through a set of interfaces that define a behaviour, such as a use case
16.	model	015	information applies to a copy or imitation of an existing or hypothetical object
17.	tile	016	information applies to a tile, a spatial subset of geographic data

7.16. 25 MD_SpatialRepresentationTypeCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_SpatialRepresentation TypeCode	SpatRepTypCd	method used to represent geographic information in the dataset
2.	vector	001	vector data is used to represent geographic data
3.	grid	002	grid data is used to represent geographic data
4.	textTable	003	textual or tabular data is used to represent geographic data
5.	tin	004	triangulated irregular network
6.	stereoModel	005	three-dimensional view formed by the intersecting homologous rays of an overlapping pair of images
7.	video	006	scene from a video recording

7.16. 26 MD_TopicCategoryCode <<Enumeration>>

	Name	Domain code	Definition
1.	MD_TopicCategoryCode	TopicCatCd	high-level geographic data thematic classification to assist in the grouping and search of available geographic data sets. Can be used to group keywords as well. Listed examples are not exhaustive. {delete - "NOTE It is understood there are overlaps between general categories and the user is encouraged to select the one most appropriate." }
2.	farming	001	rearing of animals and/or cultivation of plants Examples: agriculture, irrigation, aquaculture, plantations, herding, pests and diseases affecting crops and livestock
3.	biota	002	flora and/or fauna in natural environment Examples: wildlife, vegetation, biological sciences, ecology, wilderness, sealife, wetlands, habitat
4.	boundaries	003	legal land descriptions Examples: political and administrative boundaries
5.	climatologyMeteorologyAtmosphere	004	processes and phenomena of the atmosphere Examples: cloud cover, weather, climate, atmospheric conditions, climate change, precipitation
6.	economy	005	economic activities, conditions and employment Examples: production, labour, revenue, commerce, industry, tourism and ecotourism, forestry, fisheries, commercial or subsistence hunting, exploration and exploitation of resources such as minerals, oil and gas
7.	elevation	006	height above or below sea level Examples: altitude, bathymetry, digital elevation models, slope, derived products
8.	environment	007	environmental resources, protection and conservation Examples: environmental pollution, waste storage and treatment, environmental impact assessment, monitoring environmental risk, nature reserves, landscape
9.	geoscientificInformation	008	information pertaining to earth sciences Examples: geophysical features and processes, geology, minerals, sciences dealing with the composition, structure and origin of the earth's rocks, risks of earthquakes, volcanic activity, landslides, gravity information, soils, permafrost, hydrogeology, erosion

	Name	Domain code	Definition
10.	health	009	health, health services, human ecology, and safety Examples: disease and illness, factors affecting health, hygiene, substance abuse, mental and physical health, health services
11.	imageryBaseMapsEarthCover	010	base maps Examples: land cover, topographic maps, imagery, unclassified images, annotations
12.	intelligenceMilitary	011	military bases, structures, activities Examples: barracks, training grounds, military transportation, information collection
13.	inlandWaters	012	inland water features, drainage systems and their characteristics Examples: rivers and glaciers, salt lakes, water utilization plans, dams, currents, floods, water quality, hydrographic charts
14.	location	013	positional information and services Examples: addresses, geodetic networks, control points, postal zones and services, place names
15.	oceans	014	features and characteristics of salt water bodies (excluding inland waters) Examples: tides, tidal waves, coastal information, reefs
16.	planningCadastre	015	information used for appropriate actions for future use of the land Examples: land use maps, zoning maps, cadastral surveys, land ownership
17.	society	016	characteristics of society and cultures Examples: settlements, anthropology, archaeology, education, traditional beliefs, manners and customs, demographic data, recreational areas and activities, social impact assessments, crime and justice, census information
18.	structure	017	man-made construction Examples: buildings, museums, churches, factories, housing, monuments, shops, towers
19.	transportation	018	means and aids for conveying persons and/or goods Examples: roads, airports/airstrips, shipping routes, tunnels, nautical charts, vehicle or vessel location, aeronautical charts, railways
20.	utilitiesCommunication	019	energy, water and waste systems and communications infrastructure and services Examples: hydroelectricity, geothermal, solar and nuclear sources of energy, water purification and distribution, sewage collection and disposal, electricity and gas distribution, data communication, telecommunication, radio,

	Name	Domain code	Definition
			communication networks

7.16. 27 MD_TopologyLevelCode <<CodeList>>

	Name	Domain code	Definition
1.	MD_TopologyLevelCode	TopoLevCd	degree of complexity of the spatial relationships
2.	geometryOnly	001	geometry objects without any additional structure which describes topology
3.	topology1D	002	1-dimensional topological complex - commonly called chain-node topology
4.	planarGraph	003	1-dimensional topological complex which is planar. (A planar graph is a graph that can be drawn in a plane in such a way that no two edges intersect except at a vertex.)
5.	fullPlanarGraph	004	2-dimensional topological complex which is planar. (A 2-dimensional topological complex is commonly called full topology in a cartographic 2D environment.)
6.	surfaceGraph	005	1-dimensional topological complex which is isomorphic to a subset of a surface. (A geometric complex is isomorphic to a topological complex if their elements are in a one-to-one, dimensional-and boundary-preserving correspondence to one another.)
7.	fullSurfaceGraph	006	2-dimensional topological complex which is isomorphic to a subset of a surface
8.	topology3D	007	3-dimensional topological complex. (A topological complex is a collection of topological primitives that are closed under the boundary operations.)
9.	fullTopology3D	008	complete coverage of a 3D Euclidean coordinate space
10.	abstract	009	topological complex without any specified geometric realization

8. Examples

This section contains a range of completed metadata records that conform to the profile. The examples describe a variety of resource types including a geographic 'dataset', 'series', 'collectionHardware', 'collectionSection', 'service' and 'nonGeographicDataset'.

The same geographic 'dataset' is described using three different sets of metadata elements; minimum, core and comprehensive. The information content of these three sample geographic 'dataset' reports increases in richness as more metadata elements are included.

Each example consists of a presentation format and ANZLIC compliant XML. There may be additional notes discussing features of the XML. In particular, note the use of XLINK in selected XML examples that allows inheritance and reduces the amount of repeated information. To improve readability, the presentation format may vary slightly from the XML.

Example 1 : Minimum metadata for a geographic 'dataset' – locality polygons

Example 2 : Core metadata for a geographic 'dataset' – locality polygons

Example 3 : Comprehensive metadata for a geographic 'dataset' – locality polygons

Example 4 : Metadata for a 'series' – photographs

Example 5 : Metadata for a 'collectionHardware' – digital camera

Example 6 : Metadata for a 'collectionSession' – photographic session

Example 7 : Metadata for a 'service' – water data web feature service

Example 8 : Metadata for a 'nonGeographicDataset' – vacancy rate survey

8.1 Example 1. Minimum metadata for a geographic dataset

Example : Locality polygons dataset.

This example shows the minimum metadata for a geographic dataset called "Localities in Victoria". It provides a brief description of the basic characteristics of the dataset. The example shows that a metadata record for a geographic dataset can be quickly and easily completed. Usually the Metadata File Identifier will be generated and automatically populated by the metadata entry tool.

Note: To enable the loading of three discrete records into the Metadata tool, the file identifier and title is slightly different for each of the three following sample 'locality polygon' metadata records. In a normal environment, the record will be stored only once but presented many different ways with the same file identifier and title.

::Identification
info

[Title](#) Localities in Victoria
(VMADMIN.LOCALITY_POLYGON)
- Minimum elements

Date	2006-09-11 (publication)
Language	eng
Abstract	This dataset is the definitive set of locality boundaries for the state of Victoria as defined by Local Government and registered by the Registrar of Geographic Names. The boundaries are aligned to Vicmap Property. This dataset is part of the Vicmap Admin dataset series.
Topic category	Boundaries
::Extent	
::Geographic box	
	<div> <div> North bound latitude -34 </div> <div> West bound longitude 141 </div> <div> East bound longitude 150 </div> <div> South bound latitude -39 </div> </div>
::Metadata	
File identifier	388fab80-4f71-11db-8a85-000f207026dc
Hierarchy level	dataset
Date stamp	2007-08-13
::Metadata	
author	
Organisation name	Department of Sustainability and Environment
Role	Custodian

Note:

Metadata hierarchy level element is documented even though it can be assumed to be “dataset” if it does not exist. In all cases, the documenter must consider the hierarchy level of the resource and explicitly or implicitly document the value.

Here is the XML (http://www.anzlic.org.au/metadata/xml/locality_polygons_minimum.xml) for the above example.

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- <?xml-stylesheet href="anzlic_iso_main.xsl" type="text/xsl"?> -->
<gmd:MD_Metadata xmlns:gmd="http://www.isotc211.org/2005/gmd"
  xmlns:srv="http://www.isotc211.org/2005/srv"
  xmlns:gco="http://www.isotc211.org/2005/gco"
  xmlns:gml="http://www.opengis.net/gml" xmlns:xlink="http://www.w3.org/1999/xlink"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.isotc211.org/2005/gmd
http://www.isotc211.org/2005/gmd/gmd.xsd
http://www.opengis.net/gml http://www.opengis.net/gml/gml.xsd">
<gmd:fileIdentifier><gco:CharacterString>388fab80-4f71-11db-8a85-000f207026ad</gco:CharacterString></gmd:fileIdentifier>
<gmd:language><gco:CharacterString>eng</gco:CharacterString></gmd:language>
```

```

<gmd:characterSet>
  <gmd:MD_CharacterSetCode

codeList="http://www.isotc211.org/2005/resources/CodeList/gmxCodeList.xml#MD_CharacterSetC
ode" codeListValue="utf8" codeSpace="eng">utf8</gmd:MD_CharacterSetCode>
  </gmd:characterSet>
  <gmd:hierarchyLevel>
    <gmd:MD_ScopeCode
codeList="http://www.isotc211.org/2005/resources/CodeList/gmxCodeList.xml#MD_ScopeCode"
codeListValue="dataset">dataset</gmd:MD_ScopeCode>
    </gmd:hierarchyLevel>
    <gmd:contact>
      <gmd:CI_ResponsibleParty>
        <gmd:organisationName><gco:CharacterString>Department of Sustainability and
Environment (DSE)</gco:CharacterString></gmd:organisationName>
        <gmd:role><gmd:CI_RoleCode
codeList="http://www.isotc211.org/2005/resources/CodeList/gmxCodeList.xml#CI_RoleCode"
codeListValue="custodian">custodian</gmd:CI_RoleCode></gmd:role>
        </gmd:CI_ResponsibleParty>
      </gmd:contact>
      <gmd:dateStamp><gco:Date>2007-08-13</gco:Date> </gmd:dateStamp>
      <gmd:identificationInfo>
        <gmd:MD_DataIdentification>
          <gmd:citation>
            <gmd:CI_Citation>
              <gmd:title><gco:CharacterString>Localities in Victoria
(VMADMIN.LOCALITY_POLYGON) - Minimum Elements</gco:CharacterString></gmd:title>
              <gmd:date>
                <gmd:CI_Date>
                  <gmd:date><gco:Date>2006-09-11</gco:Date></gmd:date>
                  <gmd:dateType><gmd:CI_DateTypeCode
codeList="http://www.isotc211.org/2005/resources/CodeList/gmxCodeList.xml#CI_DateTypeCode"
codeListValue="publication">publication</gmd:CI_DateTypeCode></gmd:dateType>
                  </gmd:CI_Date>
                </gmd:date>
              </gmd:CI_Citation>
            </gmd:citation>
            <gmd:abstract>
              <gco:CharacterString> This dataset is the definitive set of locality boundaries
for the state of Victoria as defined by Local Government and registered by the Registrar
of Geographic Names. The boundaries are aligned to Vicmap Property. This dataset is part
of the Vicmap Admin dataset series.
              </gco:CharacterString>
            </gmd:abstract>
            <gmd:language>
              <gco:CharacterString>eng</gco:CharacterString>
            </gmd:language>
            <gmd:topicCategory>
              <gmd:MD_TopicCategoryCode>boundaries</gmd:MD_TopicCategoryCode>
            </gmd:topicCategory>
            <gmd:extent>
              <gmd:EX_Extent>
                <gmd:geographicElement>
                  <gmd:EX_GeographicBoundingBox>
                    <gmd:westBoundLongitude>
                      <gco:Decimal>141</gco:Decimal>
                    </gmd:westBoundLongitude>
                    <gmd:eastBoundLongitude>
                      <gco:Decimal>150</gco:Decimal>
                    </gmd:eastBoundLongitude>
                    <gmd:southBoundLatitude>
                      <gco:Decimal>-39</gco:Decimal>
                    </gmd:southBoundLatitude>
                    <gmd:northBoundLatitude>
                      <gco:Decimal>-34</gco:Decimal>
                    </gmd:northBoundLatitude>
                  </gmd:EX_GeographicBoundingBox>
                </gmd:geographicElement>
              </gmd:EX_Extent>
            </gmd:extent>
          </gmd:MD_DataIdentification>
        </gmd:identificationInfo>
      </gmd:MD_Metadata>

```

The XML for the above example is available at

http://anzlic.org.au/metadata/xml/locality_polygon_minimum.xml

8.2 Example 2. Core metadata for a geographic dataset

Example : Locality polygons dataset.

This example shows the core metadata for the geographic dataset “Localities in Victoria” which is used in the previous example. Core metadata includes the minimum set of metadata elements and some additional optional elements that are normally required to describe a dataset, typically for discovery purposes. As can be seen in this example, the metadata record is richer and, although it requires extra effort to complete, provides additional information that is very useful. ANZLIC strongly recommends completion of the core metadata for geographic datasets.

The list of core metadata elements does not explicitly identify all the metadata elements in the set. For instance, different organisations may distribute resources according to different business rules. Where this occurs, different metadata elements may be used to describe the distribution of a resource.

::Identification info	
Title	Localities in Victoria (VMADMIN.LOCALITY _POLYGON)
Date	2006-09-11 (publication)
Language	eng
Character set	utf8
Abstract	This dataset is the definitive set of locality boundaries for the state of Victoria as defined by Local Government and registered by the Registrar of Geographic Names. The boundaries are aligned to Vicmap Property. This dataset is part of the Vicmap Admin dataset series.
Topic category	boundaries
Spatial representation type	vector
::Equivalent scale	
Denominator	25 metres
::Extent	

Description	Victoria		
::Geographic box			
		North bound latitude	-34
	West bound longitude		East bound longitude
	141		150
::Geographic Identifier			
		South bound latitude	-39
Title	ANZLIC Geographic Extent Name Register - States and Territories		
Date	2006-10-10 (revision)		
Edition	Version 2		
Edition date	2001-02-01		
Identifier	http://www.anzlic.org.au/.../anzlic-allgens.xml#a nzlic-state_territory		
Organisation name	ANZLIC - the Spatial Information Council		
Role	custodian		
Code	VIC		
Extent type code	1		
Extent			
::Temporal			
Description	Data represents localities mapped since mid 2005		
Begin date	2005-05-15		
End date	Now		
::Point of contact			
Organisation name	Department of Sustainability and Environment, Victoria	Voice	+61 3 8636 2683
Position name	Marketing manager	Facsimile	+61 3 8636 2813
Role	Point Of Contact	Delivery point	PO Box 500
		City	East Melbourne
		Administrative area	Victoria
		Postal code	3002
		Country	australia
		Electronic mail address	vicmap@dse.vic.gov.au

Linkage

http://www.land.vic.gov.au/vicmapdsp

Contact instructions

Please consult the above link for a list of Data Suppliers from whom this dataset may be purchased.

::Distribution info

Distribution Format

Most popular formats including ESRI shape, MapInfo Tab and Oracle Spatial

Distribution Version

Various

OnLine resource Linkage

http://www.land.vic.gov.au/vicmapdsp

OnLine resource Description

Web page listing Data Service Providers (DSP)s

::Reference system info

Title

EPSG Geodetic Parameter Dataset

Date

20070716 (Revision)

Edition

6.13

Code

4283

::Data quality info

Scope

Hierarchy level

dataset

Description

Localities in Victoria

Lineage

Statement

Local Government defines suburb, town and rural district boundaries after seeking appropriate consultation with all interested parties. Proposed boundaries/names are submitted to the Registrar of Geographic Names for approval and formal gazettal. As boundary and name information changes are processed through the formal definition and gazettal process at the Registrar of Geographic Names, the amendments will be flagged and the dataset will be updated by the

maintainer with all new boundaries aligned to Vicmap Property.

Description

Vicmap Property is the principal source of the digital data. Its accuracy varies across Victoria with metropolitan Melbourne source data collected at 1:500 scale and rural Victoria data collected at 1:25,000. For further information see the Vicmap Property product specification at <http://www.land.vic.gov.au/vicmap>.

::Metadata

<u>File identifier</u>	388fab80-4f71-11db-8a85-000f207026dc
<u>Language</u>	eng
<u>Character set</u>	utf8
<u>Hierarchy level</u>	dataset
<u>Hierarchy level name</u>	dataset - Localities -Victoria
<u>Date stamp</u>	2007-08-13
<u>Metadata standard name</u>	ANZLIC Metadata Profile
<u>Metadata standard version</u>	1.1

::Metadata

author

<u>Individual name</u>	Falzon Katie Ms	<u>Voice</u>	+61 3 8636 2319
<u>Organisation name</u>	Department of Sustainability and Environment	<u>Facsimile</u>	+61 3 8636 2813
<u>Position name</u>	Project Officer	<u>Delivery point</u>	PO Box 500
<u>Role</u>	custodian	<u>City</u>	East Melbourne
		<u>Administrative area</u>	Victoria
		<u>Postal code</u>	3002
		<u>Country</u>	Australia

[Electronic
mail address](#)

katie.falzon@dse.vic.gov.au

[Linkage](#)

[http://www.land.vic.gov.au/vic
mapdsp](http://www.land.vic.gov.au/vic
mapdsp)

Note:

If an identifier is used to represent a geographic area, it is recommended that the geographic bounding box be also recorded as part of the metadata entry, preferably automatically by the metadata editor tool, to support easy and quick spatial searching and to permanently record the coordinates of the spatial extent of the dataset. Hence, this example record of “Core metadata for geographic datasets” describes the spatial extent of the dataset using both the geographic bounding box and geographic identifier even though technically only one of these descriptors is required by the standard

The XML for the above example is available at

http://anzlic.org.au/metadata/xml/locality_polygon_core.xml

8.3 Example 3. Comprehensive metadata for a geographic dataset

Example : Locality polygons dataset.

This example depicts comprehensive metadata for the geographic dataset “Localities in Victoria” (which has also been used in the previous example).

This comprehensive description includes all core metadata (which includes the minimum set of metadata elements) and other elements in the Profile useful in describing the dataset.

::Identification info			
			
Title	Localities in Victoria (VMADMIN.LOCALITY_POL YGON)		
Date	2006-09-11 (publication)		
::Responsible Party			
Individual name	Falzon Katie Ms	Voice	+61 3 8636 2319
Organisation name	Department of Sustainability and Environment	Facsimile	+61 3 8636 2813
Position name	Project Officer	Delivery point	PO Box 500
Role	custodian	City	East Melbourne
		Administrative area	Victoria
		Postal code	3002
		Country	Australia
		Electronic mail address	katie.falzon@dse.vic.gov.au
		Linkage	http://www.land.vic.gov.au/vic map
Presentation form	mapDigital		
Language	eng		
Character set	utf8		
Abstract	This dataset is the definitive set of locality boundaries for the state of		

Victoria as defined by Local Government and registered by the Registrar of Geographic Names. The boundaries are aligned to Vicmap Property. This dataset is part of the Vicmap Admin dataset series.

[Supplemental Information Status](#) None

[Topic category](#) boundaries

[Descriptive Keywords](#) BOUNDARIES-administrative, LAND-ownership (theme)

[Descriptive Keywords Thesaurus Title](#) ANZLIC Search Words

[Spatial representation type](#) vector

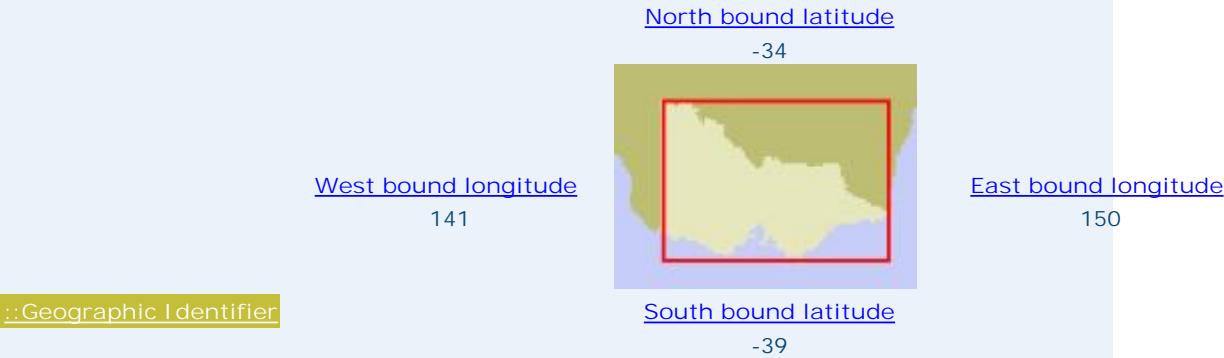
[::Equivalent scale](#)

[Denominator](#) 25 metres

[::Extent](#)

[Description](#) Victoria

[::Geographic box](#)



[::Geographic Identifier](#)

[Title](#) ANZLIC Geographic Extent Name Register - States and Territories

[Date](#) 2006-10-10 (revision)

[Edition](#) Version 2

[Edition date](#) 2001-02-01

Identifier	http://www.anzlic.org.au/.../anzlic-allgens.xml#anzlic-state_territory
Organisation name	ANZLIC - the Spatial Information Council
Role	custodian
Code	VIC
Extent type code	1

::Extent

::Temporal

Description	Data represents localities mapped since mid 2005
Begin date	2005-05-15
End date	Now

Access constraints	Intellectual Property Rights
Use constraints	Other Restrictions
Use limitation	The data is available under licence from Spatial Information Infrastructure in a variety of formats and media. Licence fees and distribution charges apply.
Maintenance and update frequency	Fortnightly
Date of next update	
Update scope	dataset

::Point of contact

Organisation name	Department of Sustainability and Environment, Victoria	Voice	+61 3 8636 2683
Position name	Marketing manager	Facsimile	+61 3 8636 2813
Role	Point Of Contact	Delivery point	PO Box 500
		City	East Melbourne
		Administrative area	Victoria
		Postal code	3002
		Country	australia
		Electronic mail address	vicmap@dse.vic.gov.au
		Linkage	http://www.land.vic.gov.au/vic_mapdsp

[Contact
instructions](#)

Please consult the above link for a list of Data Suppliers from whom this dataset may be purchased.

[Environment
description](#)

This dataset is maintained by a Spatial Information Infrastructure (SII) contractor. It is supplied to SII in SII's proprietary Incremental Update Format (IUF) and loaded into ESRI's ArcSDE (Oracle with geometry stored as sde binary)

::Distribution info

[Distribution Format](#)

Most popular formats including ESRI shape, MapInfo Tab and Oracle Spatial

[Distribution Version](#)

Various

[OnLine](#)

<http://www.land.vic.gov.au/vicmapdsp>

[resource Linkage](#)

[OnLine](#)

Web page listing Data Service Providers (DSP)s

[resource Description](#)

::Reference system info

[Title](#)

EPSG Geodetic Parameter Dataset

[Date](#)

20070716 (Revision)

[Edition](#)

6.13

[Code](#)

4283

::Data quality info

Scope

[Hierarchy level](#)

dataset

[Description](#)

Localities in Victoria

[Lineage](#)

[Statement](#)

Local Government defines suburb, town and rural district boundaries after seeking appropriate consultation with all interested parties. Proposed boundaries/names are submitted to the Registrar of Geographic Names for approval and formal gazettal. As boundary and name information changes are processed through the formal definition and gazettal process at the Registrar of Geographic Names, the amendments will be flagged and the

dataset will be updated by the maintainer with all new boundaries aligned to Vicmap Property.

Description

Vicmap Property is the principal source of the digital data. Its accuracy varies across Victoria with metropolitan Melbourne source data collected at 1:500 scale and rural Victoria data collected at 1:25,000. For further information see the Vicmap Property product specification at <http://www.land.vic.gov.au/vicmap>.

::Report -
Non quantitative
attribute accuracy

Name of measure

Valid code Test

Measure description

Measure description
This measure validates codes/values against the authoritative list published as Vicmap Reference Table LOCALITY.

Evaluation method type code

Evaluation method type
code
Direct Internal

DateTime

2006-11-14

::Conformance Result

Title

Valid Code Test

Title Date

2005-5-15 (revision)

Explanation

All LOCALITY_name and GAZETTED_LOCALITY_NAMES are valid

Pass/Fail

Pass

::Report -
Completeness omission

Name of measure

Codelist omission

Measure description

This measure ensures all gazetted localities registered in the authoritative list published as Vicmap Reference Table LOCALITY are present in the dataset

DateTime

2006-11-13

Conformance Result

Title	Omitted code Test
Title Date	2005-5-15 (revision)
Explanation	valid
Pass/Fail	Pass

Report - Topological consistency

Name of measure	Overlapping polygon
Measure description	This measure identifies overlapping polygons.
DateTime	2006-11-14

Conformance Result

Title	Overlapping polygon Test
Title Date	2005-5-15 (revision)
Explanation	Five (5) overlapping polygons exist.
Pass/Fail	Pass

Report - Conceptual consistency

Name of measure	Feature represented as a single object.
Measure description	Each locality must be represented as a single object. Where the locality is represented by 2 or more parts, the locality feature will be represented as a single object as a multi-part polygon.
DateTime	2006-11-10

Conformance Result

Title	Single feature Test
Title Date	2005-5-15 (revision)
Explanation	All localities are represented as single object.
Pass/Fail	Pass

Report - Absolute external positional accuracy

Name of measure	Absolute external positional accuracy
DateTime	2006-11-10

Conformance Result

Title	Positional accuracy Test
-----------------------	--------------------------

Title Date	2005-5-15 (revision)
Explanation	Varies as per scale of capture of Vicmap Property. Vicmap Property is classified as 'BB' accuracy, ie. 90% of well-defined features are within 1mm, at plot scale, of their true position, eg. 1:500 equates to +/- 0.5metre and 1:25,000 equates to +/- 25 metres. Anecdotal evidence suggests that the spatial accuracy of the major part of the data set, at all scales is frequently better than BB.
Pass/Fail	Pass

::Metadata

File identifier	388fab80-4f71-11db-8a85-000f207026dc
Language	eng
Character set	utf8
Hierarchy level	dataset
Hierarchy level name	dataset - Localities -Victoria
Date stamp	2007-08-13
Metadata standard name	ANZLIC Metadata Profile
Metadata standard version	1.1

::Metadata author

Individual name	Falzon Katie Ms	Voice	+61 3 8636 2319
Organisation name	Department of Sustainability and Environment	Facsimile	+61 3 8636 2813
Position name	Project Officer	Delivery point	PO Box 500
Role	custodian	City	East Melbourne
		Administrative area	Victoria
		Postal code	3002
		Country	Australia
		Electronic mail address	katie.falzon@dse.vic.gov.au
		Linkage	http://www.land.vic.gov.au/vic_mapdsp

The XML for the above example is available at

http://anzlic.org.au/metadata/xml/locality_polygon_comprehensive_example.xml

8.4 Example 4. Metadata for a 'series'

Example : photographs

::Metadata			
<u>File identifier</u>	1F0D7EEB-D1C8-3290-B160-F6 0BF1CF1E94		
<u>Language</u>	eng		
<u>Hierarchy level</u>	series		
Hierarchy level name	series		
<u>Date stamp</u>	2007-08-27		
<u>Metadata standard name</u>	ANZLIC Metadata Profile		
<u>Metadata standard version</u>	1.1		
::Metadata contact details			
<u>Organisation name</u>	Geoscience Australia	<u>Voice</u>	+61 2 6249 9111
<u>Role</u>	pointOfContact	<u>Facsimile</u>	+61 2 6249 9999
		<u>Delivery point</u>	GPO Box 378
		<u>City</u>	Canberra
		<u>Administrative area</u>	ACT
		<u>Postal code</u>	2601
		<u>Country</u>	Australia
		<u>Electronc mail address</u>	sales@ga. gov.au
		<u>Linkage</u>	http://ww w.ga.gov. au
::Identification info			
<u>Title</u>	Geoscience Australia's Open Day Photographic Series		
<u>Date</u>	2007-08-26 (revision)		
<u>Language</u>	eng		
<u>Character set</u>	utf8		
<u>Abstract</u>	Each National Science Week on Sunday, Geoscience Australia opens its doors to the community to showcase a diverse range of work activities. Members of the public can discover how earthquakes are detected, pan for gold, tour the building, view Australia in 3D, become a seafloor detective and talk to the people who work for Australia's national geoscience research organisation. There's something for everyone.		

Photographs of GA's open day have been taken since 2005. Only the thumbnail images of the most recent GA Open Day photographs are available.

Topic category geoscientificInformation

Point of contact

Organisation name Geoscience Australia

Role Point Of Contact

Voice +61 2
6249
9111

Facsimile +61 2
6249
9999

Delivery point GPO Box
378

City Canberra

Administrative area ACT

Postal code 2601

Country Australia

Electronic mail address sales@ga.
gov.au

Linkage http://www.
ga.gov.
au

XML for the above example.

Note :

1. The very first line is the XML declaration and that it includes the character encoding attribute with a value of "UTF-8". This means that the characterSet value for the metadata is not necessary. If the character encoding attribute was not included in the XML declaration then the characterSet value for the metadata needs to be declared.
2. The format for the declaration of the root element MD_Metadata. It is best practice to use this format so that anyone who downloads this metadata record can easily find the W3C XML Schemas (XSD) that this XML document complies to. In this case it is the ISO 19139 Geographic Information - Metadata - XML schema implementation" XSDs.
3. It is best practice to give the full URL to the code lists used. This will allow anyone who has downloaded the XML record to know where to get the official code list and can validate the code list values against this list.

```
<?xml version="1.0" encoding="UTF-8"?>
<gmd:MD_Metadata xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:gco="http://www.isotc211.org/2005/gco"
  xmlns:gmd="http://www.isotc211.org/2005/gmd"
  xmlns:gts="http://www.isotc211.org/2005/gts"
  xmlns:gsr="http://www.isotc211.org/2005/gsr"
  xmlns:gss="http://www.isotc211.org/2005/gss"
  xmlns:gmw="http://www.isotc211.org/2005/gmw"
  xmlns:gml="http://www.opengis.net/gml"
  xmlns:xlink="http://www.w3.org/1999/xlink"
  xsi:schemaLocation="http://www.isotc211.org/2005/gmd
```

```

http://www.isotc211.org/2005/gmd/gmd.xsd
http://www.opengis.net/gml http://www.opengis.net/gml/gml.xsd
http://www.w3.org/1999/xlink http://www.w3.org/1999/xlink/xlinks.xsd">
<gmd:fileIdentifier>

<gco:CharacterString>1F0D7EEB-D1C8-3290-B160-F60BF1CF1E94</gco:CharacterString>
</gmd:fileIdentifier>
<gmd:language>
  <gco:CharacterString>eng</gco:CharacterString>
</gmd:language>
<gmd:hierarchyLevel>
  <gmd:MD_ScopeCode
codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodeLists.xml#MD_Sc
opeCode" codeListValue="series"></gmd:MD_ScopeCode>
</gmd:hierarchyLevel>
<gmd:hierarchyLevelName>
  <gco:CharacterString>series</gco:CharacterString>
</gmd:hierarchyLevelName>
  <!-- metadata contact details -->
<gmd:contact>
  <gmd:CI_ResponsibleParty uuid="GADetails">
    <gmd:organisationName>
      <gco:CharacterString>Geoscience Australia</gco:CharacterString>
    </gmd:organisationName>
    <gmd:contactInfo>
      <gmd:CI_Contact uuid="GAContactDetails">
        <gmd:phone>
          <gmd:CI_Telephone>
            <gmd:voice>
              <gco:CharacterString>+61 2 6249
9111</gco:CharacterString>
            </gmd:voice>
            <gmd:facsimile>
              <gco:CharacterString>+61 2 6249
9999</gco:CharacterString>
            </gmd:facsimile>
          </gmd:CI_Telephone>
        </gmd:phone>
        <gmd:address>
          <gmd:CI_Address>
            <gmd:deliveryPoint>
              <gco:CharacterString>GPO Box
378</gco:CharacterString>
            </gmd:deliveryPoint>
            <gmd:city>

<gco:CharacterString>Canberra</gco:CharacterString>
            </gmd:city>
            <gmd:administrativeArea>
              <gco:CharacterString>ACT</gco:CharacterString>
            </gmd:administrativeArea>
            <gmd:postalCode>
              <gco:CharacterString>2601</gco:CharacterString>
            </gmd:postalCode>
            <gmd:country>

<gco:CharacterString>Australia</gco:CharacterString>
            </gmd:country>
            <gmd:electronicMailAddress>

<gco:CharacterString>sales@ga.gov.au</gco:CharacterString>
            </gmd:electronicMailAddress>
          </gmd:CI_Address>
        </gmd:address>
        <gmd:onlineResource>
          <gmd:CI_OnlineResource>
            <gmd:linkage>

```

```

        <gmd:URL>http://www.ga.gov.au</gmd:URL>
      </gmd:linkage>
    </gmd:CI_OnlineResource>
  </gmd:onlineResource>
</gmd:CI_Contact>
</gmd:contactInfo>
<gmd:role>
  <gmd:CI_RoleCode
codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodetlists.xml#CI_Ro
leCode" codeListValue="pointOfContact"></gmd:CI_RoleCode>
  </gmd:role>
</gmd:CI_ResponsibleParty>
</gmd:contact>
<gmd:dateStamp>
  <gco:Date>2007-08-27</gco:Date>
</gmd:dateStamp>
<gmd:metadataStandardName>
  <gco:CharacterString>ANZLIC Metadata Profile</gco:CharacterString>
</gmd:metadataStandardName>
<gmd:metadataStandardVersion>
  <gco:CharacterString>1.1</gco:CharacterString>
</gmd:metadataStandardVersion>
<gmd:identificationInfo>
  <gmd:MD_DataIdentification>
    <gmd:citation>
      <gmd:CI_Citation>
        <gmd:title>
          <gco:CharacterString>Geoscience Australia's Open Day
            Photographic Series</gco:CharacterString>
        </gmd:title>
        <gmd:date>
          <gmd:CI_Date>
            <gmd:date>
              <gco:Date>2007-08-26</gco:Date>
            </gmd:date>
            <gmd:dateType>
              <gmd:CI_DateTypeCode
codeList=
http://www.isotc211.org/2005/resources/Codelist/gmxCodetlists.xml#CI_DateTypeCode
codeListValue="revision"></gmd:CI_DateTypeCode>
              </gmd:dateType>
            </gmd:CI_Date>
          </gmd:date>
          <gmd:citedResponsibleParty
xlink:href="http://asdd.ga.gov.au/asdd/work/ISOmetadata/GAopenDaySeries.xml#GADe
tails"/>
        </gmd:CI_Citation>
      </gmd:citation>
    <gmd:abstract>
      <gco:CharacterString>Each National Science Week on Sunday,
        Geoscience Australia opens its doors to the community
        to showcase a diverse range of work activities. Members of
the public can discover how earthquakes are detected, pan for gold, tour the
building,
        view Australia in 3D, become a seafloor detective and talk
to the people who work for Australia's national geoscience research
organisation.
        There's something for everyone. Photographs of GA's open day
        have been taken since 2005. Only the thumbnail images of
        the most recent GA Open Day photographs are available.
      </gco:CharacterString>
    </gmd:abstract>
    <gmd:language>
      <gco:CharacterString>eng</gco:CharacterString>
    </gmd:language>
    <gmd:topicCategory>
<gmd:MD_TopicCategoryCode>geoscientificInformation</gmd:MD_TopicCategoryCode>

```

```
        </gmd:topicCategory>
      </gmd:MD_DataIdentification>
    </gmd:identificationInfo>
  </gmd:MD_Metadata>
```

The XML for the above example is available at <http://anzlic.org.au/metadata/xml/photographs.xml>

8.5 Example 5. Metadata for a 'collectionHardware'

Example : Digital camera

This is the minimal metadata for a collection hardware called a "camera". This camera was used to take photographs at the Geoscience Australia Open Day Series. This example shows that ANZLIC Metadata Profile can be used for many different types of resources.

Although there is more information here than the minimum elements, the contact details have been

inherited from the previous example.

::Metadata

[File identifier](#) 2137A77C-4001-3652-9125-BCB300
 96EAD5
[Language](#) Eng
[Hierarchy level](#) collectionHardware
[Hierarchy level](#) collectionHardware - digital camera
[name](#)
[Date stamp](#) 2007-08-27
[Metadata](#) 1.1
[standard version](#)

::Metadata contact details

Organisation	Geoscience Australia	Voice	+61 2 6249 9111
name		Facsimile	+61 2 6249 9999
Role	pointOfContact	Delivery point	GPO Box 378
		City	Canberra
		Administrative area	ACT
		Postal code	2601
		Country	Australia
		Electronic mail address	sales@ga.gov.au
		Linkage	http://www.ga.gov.au

::Identification info

[Title](#) Nikon D70 Digital Single Lens Reflex Camera
[Date](#) 2004 (creation)
[Language](#) Eng
[Character set](#) utf8
[Abstract](#) The Nikon D70 Digital Single Lens Reflex Camera used to film the Geoscience Australia Open day events is owned by Chris Fitzgerald. The Nikon D70 is a 6.1 megapixel CCD (charged-coupled device) with accurate white balance has a built-in auto pop-up flash. It can take three frames per second continuous burst of 144 pictures but is usually used for single shot pictures. Chris Fitzgerald used this camera to take photos of the Geoscience Australia's Open Day on 2007-08-26.

XML for the above example.**Note :**

The contact information for the metadata (contact) is a reference to an external document using XLINK. When the metadata record is presented, as in the above representation, this XLINK is resolved and the information it obtained from the referenced XML document. This allows inheritance and reduces the amount of repeated information.

```
<?xml version="1.0" encoding="UTF-8"?>
<gmd:MD_Metadata xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:gco="http://www.isotc211.org/2005/gco"
  xmlns:gmd="http://www.isotc211.org/2005/gmd"
  xmlns:gts="http://www.isotc211.org/2005/gts"
  xmlns:gsr="http://www.isotc211.org/2005/gsr"
  xmlns:gss="http://www.isotc211.org/2005/gss"
  xmlns:gmw="http://www.isotc211.org/2005/gmw"
  xmlns:gml="http://www.opengis.net/gml"
  xmlns:xlink="http://www.w3.org/1999/xlink"
  xsi:schemaLocation="http://www.isotc211.org/2005/gmd
http://www.isotc211.org/2005/gmd/gmd.xsd
http://www.opengis.net/gml http://www.opengis.net/gml/gml.xsd
http://www.w3.org/1999/xlink http://www.w3.org/1999/xlink/xlinks.xsd">
  <gmd:fileIdentifier>

<gco:CharacterString>2137A77C-4001-3652-9125-BCB30096EAD5</gco:CharacterString>
  </gmd:fileIdentifier>
  <gmd:language>
    <gco:CharacterString>eng</gco:CharacterString>
  </gmd:language>
  <gmd:hierarchyLevel>
    <gmd:MD_ScopeCode
codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodeLists.xml#MD_Sc
opeCode" codeListValue="collectionHardware"></gmd:MD_ScopeCode>
    </gmd:hierarchyLevel>
    <gmd:hierarchyLevelName>
      <gco:CharacterString>collectionHardware - digital
camera</gco:CharacterString>
    </gmd:hierarchyLevelName>
    <!-- metadata contact details -->
    <gmd:contact>
      <gmd:CI_ResponsibleParty>
        <gmd:organisationName>
          <gco:CharacterString>Geoscience Australia</gco:CharacterString>
        </gmd:organisationName>
        <gmd:contactInfo
xlink:href="http://asdd.ga.gov.au/asdd/work/ISOmetadata/GAOpenDaySeries.xml#GACo
ntactDetails"/>
        </gmd:contactInfo>
        <gmd:role>
          <gmd:CI_RoleCode
codeList="
http://www.isotc211.org/2005/resources/Codelist/gmxCodeLists.xml#CI_RoleCode
codeListValue="pointOfContact"></gmd:CI_RoleCode>
          </gmd:role>
        </gmd:CI_ResponsibleParty>
      </gmd:contact>
      <gmd:dateStamp>
        <gco>Date>2007-08-27</gco>Date>
      </gmd:dateStamp>
      <!-- Information about the resource. -->
      <gmd:identificationInfo>
        <gmd:MD_DataIdentification>
          <gmd:citation>
            <gmd:CI_Citation>
              <gmd:title>
                <gco:CharacterString>Nikon D70 Digital Single Lens
Reflex Camera</gco:CharacterString>
              </gmd:title>
            </gmd:CI_Citation>
          </gmd:citation>
        </gmd:MD_DataIdentification>
      </gmd:identificationInfo>
    </gmd:contact>
  </gmd:hierarchyLevel>
</gmd:MD_ScopeCode>
</gmd:hierarchyLevelName>
</gmd:contact>
</gmd:language>
</gmd:fileIdentifier>
</gmd:MD_Metadata>
```

```

        </gmd:title>
        <gmd:date>
            <gmd:CI_Date>
                <gmd:date>
                    <gco>Date>2004</gco>Date>
                </gmd:date>
                <gmd:dateType>
                    <gmd:CI_DateTypeCode>
codeList=
http://www.isotc211.org/2005/resources/CodeList/gmxCodeLists.xml#CI\_DateTypeCode
codeListValue="creation"></gmd:CI_DateTypeCode>
                </gmd:dateType>
            </gmd:CI_Date>
        </gmd:date>
    </gmd:CI_Citation>
</gmd:citation>
<gmd:abstract>
    <gco:CharacterString>The Nikon D70 Digital Single Lens Reflex
        Camera used to film the Geoscience Australia Open day events
        is owned by Chris Fitzgerald. The Nikon D70 is a 6.1
        megapixel CCD (charged-coupled device) with accurate white
        balance has a built-in auto pop-up flash. It can take
        three frames per second continuous burst of 144 pictures but
        is usually used for single shot pictures.
        Chris Fitzgerald used this camera to take photos of the
        Geoscience Australia's Open Day on 2007-08-26.
    </gco:CharacterString>
</gmd:abstract>
<gmd:language>
    <gco:CharacterString>eng</gco:CharacterString>
</gmd:language>
</gmd:MD_DataIdentification>
</gmd:identificationInfo>
</gmd:MD_Metadata>

```

The XML for the above example is available at http://anzlic.org.au/metadata/xml/digital_camera.xml

8.6 Example 6. Metadata for a 'collectionSession'

Example : a photographic session

This example is the metadata for the photographs taken at the most recent Geoscience Australia Open Day.

::Metadata			
File identifier	46E7F9B1-99F6-3241-9039-EAE7201534F4		
Language	eng		
Hierarchy level	collectionSession		
Hierarchy level name	collectionSession		
Date stamp	2007-08-27		
Metadata standard name	ANZLIC Metadata Profile		
Metadata standard version	1.1		
::Metadata author			
Organisation name	Geoscience Australia	Voice	+61 2 6249 9111
Role	pointOfContact	Facsimile	+61 2 6249 9999
		Delivery point	GPO Box 378
		City	Canberra
		Administrative area	ACT
			2601
		Country	Australia
		Electronic mail address	sales@ga.gov.au
		Linkage	http://www.ga.gov.au
::Identification info			
Title	Geoscience Australia's Open Day Photographs 26th August 2007		
Date	2007-08-26 (creation)		
Language	eng		
Character set	utf8		

[Abstract](#)

During National Science Week on Sunday 26th August 2007, Geoscience Australia opened its doors to the community to showcase a diverse range of work activities. Members of the public had the opportunity to discover how earthquakes are detected, pan for gold, tour the building, view Australia in 3D, become a seafloor detective and talk to the people who work for Australia's national geoscience research organisation. The photographs of that open day have been converted into thumbnail images and are available on the GA web site.

::Point of contact[Individual](#)[Name](#)

Chris Fitzgerald

[Voice](#)

+61 2 6249 9111

[Organisation](#)[name](#)

Geoscience Australia

[Facsimile](#)

+61 2 6249 9999

[Position](#)[name](#)

Geoscience Australia's Open Day Photographer

[Delivery point](#)

GPO Box 378

[Role](#)

originator

[City](#)

Canberra

[Administrative area](#)

ACT

[Postal code](#)

2601

[Country](#)

Australia

[Electronic mail address](#)

sales@ga.gov.au

[Linkage](#)

http://www.ga.gov.au

::Constraint information[Use limitation](#)

The images are only available in thumbnail size for privacy reasons.

[Access constraint](#)

restricted

[Access constraint](#)

Intellectual property rights

[Use constraint](#)

copyright

XML relating to the above metadata.**Note :**

1. The metadata contact details come from another XML metadata record using XLINK.
2. The resource contact information comes from another XML metadata record using XLINK.

```
<?xml version="1.0" encoding="UTF-8"?>
<gmd:MD_Metadata xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:gco="http://www.isotc211.org/2005/gco"
  xmlns:gmd="http://www.isotc211.org/2005/gmd"
  xmlns:gts="http://www.isotc211.org/2005/gts"
  xmlns:gsr="http://www.isotc211.org/2005/gsr"
  xmlns:gss="http://www.isotc211.org/2005/gss"
  xmlns:gmw="http://www.isotc211.org/2005/gmw"
  xmlns:gml="http://www.opengis.net/gml"
```

```

    xmlns:xlink="http://www.w3.org/1999/xlink"
    xsi:schemaLocation="http://www.isotc211.org/2005/gmd
http://www.isotc211.org/2005/gmd/gmd.xsd
http://www.opengis.net/gml http://www.opengis.net/gml/gml.xsd
http://www.w3.org/1999/xlink http://www.w3.org/1999/xlink/xlinks.xsd">
    <gmd:fileIdentifier>

<gco:CharacterString>46E7F9B1-99F6-3241-9039-EAE7201534F4</gco:CharacterString>
    </gmd:fileIdentifier>
    <gmd:language>
        <gco:CharacterString>eng</gco:CharacterString>
    </gmd:language>
    <gmd:hierarchyLevel>
        <gmd:MD_ScopeCode
codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodelists.xml#MD_Sc
opeCode" codeListValue="collectionSession"/>
        </gmd:hierarchyLevel>
        <gmd:hierarchyLevelName>
            <gco:CharacterString>collectionSession</gco:CharacterString>
        </gmd:hierarchyLevelName>
        <!-- metadata contact details inherited from GAOpenDaySeries.xml -->
        <gmd:contact
xlink:href="http://asdd.ga.gov.au/asdd/work/ISOmetadata/GAOpenDaySeries.xml#GADe
tails"/>
        <gmd:dateStamp>
            <gco:Date>2007-08-27</gco:Date>
        </gmd:dateStamp>
        <gmd:metadataStandardName>
            <gco:CharacterString>ANZLIC Metadata Profile</gco:CharacterString>
        </gmd:metadataStandardName>
        <gmd:metadataStandardVersion>
            <gco:CharacterString>1.1</gco:CharacterString>
        </gmd:metadataStandardVersion>
        <gmd:dataSetURI>
<gco:CharacterString>http://www.ga.gov.au/news/index.jsp#openday</gco:CharacterS
tring>
        </gmd:dataSetURI>
        <!-- Information about the resource. -->
        <gmd:identificationInfo>
            <gmd:MD_DataIdentification>
                <gmd:citation>
                    <gmd:CI_Citation>
                        <gmd:title>
                            <gco:CharacterString>Geoscience Australia's Open Day
Photographs 26th August 2007</gco:CharacterString>
                        </gmd:title>
                        <gmd:date>
                            <gmd:CI_Date>
                                <gmd:date>
                                    <gco:Date>2007-08-26</gco:Date>
                                </gmd:date>
                                <gmd:dateType>
                                    <gmd:CI_DateTypeCode

codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodelists.xml#CI_Da
teTypeCode" codeListValue="revision"/>
                                </gmd:dateType>
                            </gmd:CI_Date>
                        </gmd:date>
                    <gmd:citedResponsibleParty>
                        <gmd:CI_ResponsibleParty>
                            <gmd:individualName>
                                <gco:CharacterString>Chris
Fitzgerald</gco:CharacterString>
                            </gmd:individualName>
                            <gmd:organisationName>
                                <gco:CharacterString>Geoscience

```

```

        Australia</gco:CharacterString>
      </gmd:organisationName>
      <gmd:positionName>
        <gco:CharacterString>Geoscience Australia's Open
          Day Photographer</gco:CharacterString>
      </gmd:positionName>
      <gmd:contactInfo
xlink:href="http://asdd.ga.gov.au/asdd/work/ISOmetadata/GAopenDay.xml#GAContactD
etails"/>
      <gmd:role>
        <gmd:CI_RoleCode

codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodelists.xml#CI_Ro
leCode" codeListValue="originator"/>
      </gmd:role>
      </gmd:CI_ResponsibleParty>
    </gmd:citedResponsibleParty>
  </gmd:CI_Citation>
</gmd:citation>
<gmd:abstract>
  <gco:CharacterString>During National Science Week on Sunday 26th
    August 2007, Geoscience Australia opened its doors to the
    community to showcase a diverse range of work activities.
    Members of the public had the opportunity to discover how
    earthquakes are detected, pan for gold, tour the building,
    view Australia in 3D, become a seafloor detective and talk
    to the people who work for Australia's national geoscience
    research organisation. The photographs of that open day have
    been converted into thumbnail images and are available on
    the GA web site. </gco:CharacterString>
</gmd:abstract>
<gmd:resourceConstraints>
  <gmd:MD_LegalConstraints>
    <gmd:useLimitation>
      <gco:CharacterString>The images are only available in
        thumbnail size for privacy
        reasons.</gco:CharacterString>
    </gmd:useLimitation>
    <gmd:accessConstraints>
      <gmd:MD_RestrictionCode
codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodelists.xml#MD_Re
strictionCode" codeListValue="restricted"></gmd:MD_RestrictionCode>
    </gmd:accessConstraints>
    <gmd:accessConstraints>
      <gmd:MD_RestrictionCode
codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodelists.xml#MD_Re
strictionCode" codeListValue="intellectualPropertyRights"/>
    </gmd:accessConstraints>
    <gmd:useConstraints>
      <gmd:MD_RestrictionCode
codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodelists.xml#MD_Re
strictionCode" codeListValue="copyright"/>
    </gmd:useConstraints>
  </gmd:MD_LegalConstraints>
</gmd:resourceConstraints>
<gmd:language>
  <gco:CharacterString>eng</gco:CharacterString>
</gmd:language>
</gmd:MD_DataIdentification>
</gmd:identificationInfo>
</gmd:MD_Metadata>

```

The XML for the above example is available at
http://anzlic.org.au/metadata/xml/photographic_session.xml

8.7 Example 7. Metadata for a 'service'

Example : Water data web feature service.

This metadata example describes a web feature 'service'. This web feature service delivers information held by the Bureau of Rural Sciences (BRS) about water.

Service metadata is specifically intended to provide information about services. In most cases it is invoked to describe on-line or web services. It uses a combination of the ISO19115 and ISO19119 standards. It should be noted that to be as useful as possible the features and attributes that the service delivers should be also provided using ISO19110. Where services are strongly linked or tightly coupled to specific dataset provisioning systems, the MD_DataIdentification elements for those latter datasets should also be provided as part of the service description.



<p>File identifier: 984D97C7-9FD7-396A-991D-FC3132015F39</p> <p>Identifier of the parent record: 873C86C6-8EC6-285F-880C-EB2001904E28</p> <p>URI for product access: http://adl.brs.gov.au/geoserver/wfs</p> <p>Product type is: service</p> <p>Product type description is: service - WFS - AWDI_Service - AG_DAFF_BRS</p>
<p align="center">RESOURCE DESCRIPTION</p>
<p>THE RESOURCE:</p> <p>Resource Identifier: ID00</p> <p>Citation Information:</p> <p>Title: Bureau of Rural Sciences - Water Data Web Feature Service - Australian Water Data Infrastructure (AWDI)</p> <p>Date and date type: 19010101 - creation</p> <p>Abstract: The Bureau of Rural Sciences (BRS) Water Web Feature Service is a system using the methodology developed by the Australian Water Data Infrastructure Project to deliver information about water</p>

resources held by BRS in the Department of Agriculture, Fisheries and Forestry (DAFF).

The water information provided has been collected during ongoing field surveys. Surveys were/are undertaken by the Water group within BRS (or its forerunners) usually as a joint exercise with State water agencies.

Data collected during field surveys and subsequent laboratory analysis are stored within BRS in an Oracle database using the Australian Groundwater Data Transfer Standard as a database structure.

The appropriate data is extracted and exported to the External PostgreSQL database, it is this external database that is used as the source for the WFS.

The WFS uses GeoServer v1.6 and Community Schemas to allow complex schema structures to be used.

Resource date and Date type: 1901-01-01 - creation

Purpose of the product: Australian Government - Department of Agriculture, Fisheries and Forestry - Provides Water Data, collected through ongoing field surveys and laboratory investigations, for the Water Web Feature Service

Progress / Status of the product: onGoing

KEYWORDS

Keyword: • GEOSCIENCE, Hydrogeology

- WATER
- WATER, Groundwater
- WATER, Quality
- WATER, Salinity

Keyword Type: theme

PARTY RESPONSIBLE FOR THE RESOURCE

Responsible Party Information

PARTY:

Role of responsible party: custodian

Organisation responsible for product: Department of Agriculture, Fisheries and Forestry (DAFF) : Bureau of Rural Sciences (BRS)

Position responsible for product: DAFF : BRS : Biosecurity and Risk Sciences (BRS)

ADDRESS:

Delivery point: GPO Box 858

City: Canberra CITY

State: Australian Capital Territory

Postalcode: 2601

Country: Australia

Responsible Party Information

PARTY:

Role of responsible party: publisher

Organisation responsible for product: Department of Agriculture, Fisheries and Forestry (DAFF) : Bureau of Rural Sciences (BRS)

Position responsible for product: DAFF : BRS : Biosecurity and Risk Sciences (BRS)

ADDRESS:

Delivery point: GPO Box 858
City: Canberra CITY
State: Australian Capital Territory
Postalcode: 2601
Country: Australia

aaa bbb

GRAPHIC OVERVIEW(S):

File name: <http://adl.brs.gov.au/AWDI/discover/overviews/wdiUMLResponseBase.gif>

File description: A4 size UML diagram of the Response Base

File name: <http://adl.brs.gov.au/AWDI/discover/overviews/wdiUMLObservations.gif>

File description: A4 size UML diagram of the Observations

File name: <http://adl.brs.gov.au/AWDI/discover/overviews/wdiUMLFeatureOfInterest.gif>

File description: A4 size UML diagram of the Features of Interest

POINT OF CONTACT FOR THE INFORMATION ABOUT THE RESOURCE**Responsible Party Information****PARTY:**

Role of responsible party: resourceProvider
Organisation responsible for product: Department of Agriculture, Fisheries and Forestry (DAFF) :

<p>Position responsible for product: Bureau of Rural Sciences (BRS)</p> <p>DAFF : BRS : Biosecurity and Risk Sciences (BRS)</p>	
<p>ADDRESS:</p>	<p>Delivery point: GPO Box 858</p> <p>City: Canberra City</p> <p>State: Australian Capital Territory</p> <p>Postalcode: 2601</p> <p>Country: Australia</p>
<p>Responsible Party Information</p>	
<p>PARTY:</p>	<p>Role of responsible party: pointOfContact</p> <p>Individual responsible for product: BLEYS Evert</p> <p>Organisation responsible for product: Department of Agriculture, Fisheries and Forestry (DAFF) : Bureau of Rural Sciences (BRS)</p> <p>DAFF : BRS : Biosecurity and Risk Sciences (BRS) : Data Management : Team Leader</p>
<p>Position responsible for product:</p>	<p>DAFF : BRS : Biosecurity and Risk Sciences (BRS) : Data Management : Team Leader</p>
<p>ADDRESS:</p>	<p>Delivery point: GPO Box 858</p> <p>City: Canberra City</p> <p>State: Australian Capital Territory</p> <p>Postalcode: 2601</p> <p>Country: Australia</p>
<p>PHONE NUMBERS</p>	<p>Telephone: +61 2 6272 5627</p> <p>Fax: +61 2 6272 4687</p>

EMAIL

Address(es): Evert.Bleys@BRS.gov.au

CONSTRAINTS**Legal Constraints:**

- Other Limitations:**
- Please contact resource distributor prior to connecting
 - All client application should acknowledge the data source

ACCESSING SERVICE:

- Fee:** • free
- Planned availability:** • 2008-06-30T00:00:00.000

EXTENT(S)**Bounding Box:**

Include / Exclude	North Latitude	South Latitude	East Longitude	West Longitude
Include	-9	-45	160	113

Geographic Extent Name:

Include / Exclude	Geographic Extent Name
Include	WA
Include	NT
Include	QLD
Include	NSW
Include	ACT
Include	VIC

Include	TAS
Include	SA

Temporal Extent:

Beginning Date: 19010101 **Ending Date:**

THE SERVICE:

SERVICE TYPE:

Type: WFS
Version: v 1.1
Community Schemas

OPERATION(S) UNDERTAKEN BY THE SERVICE:

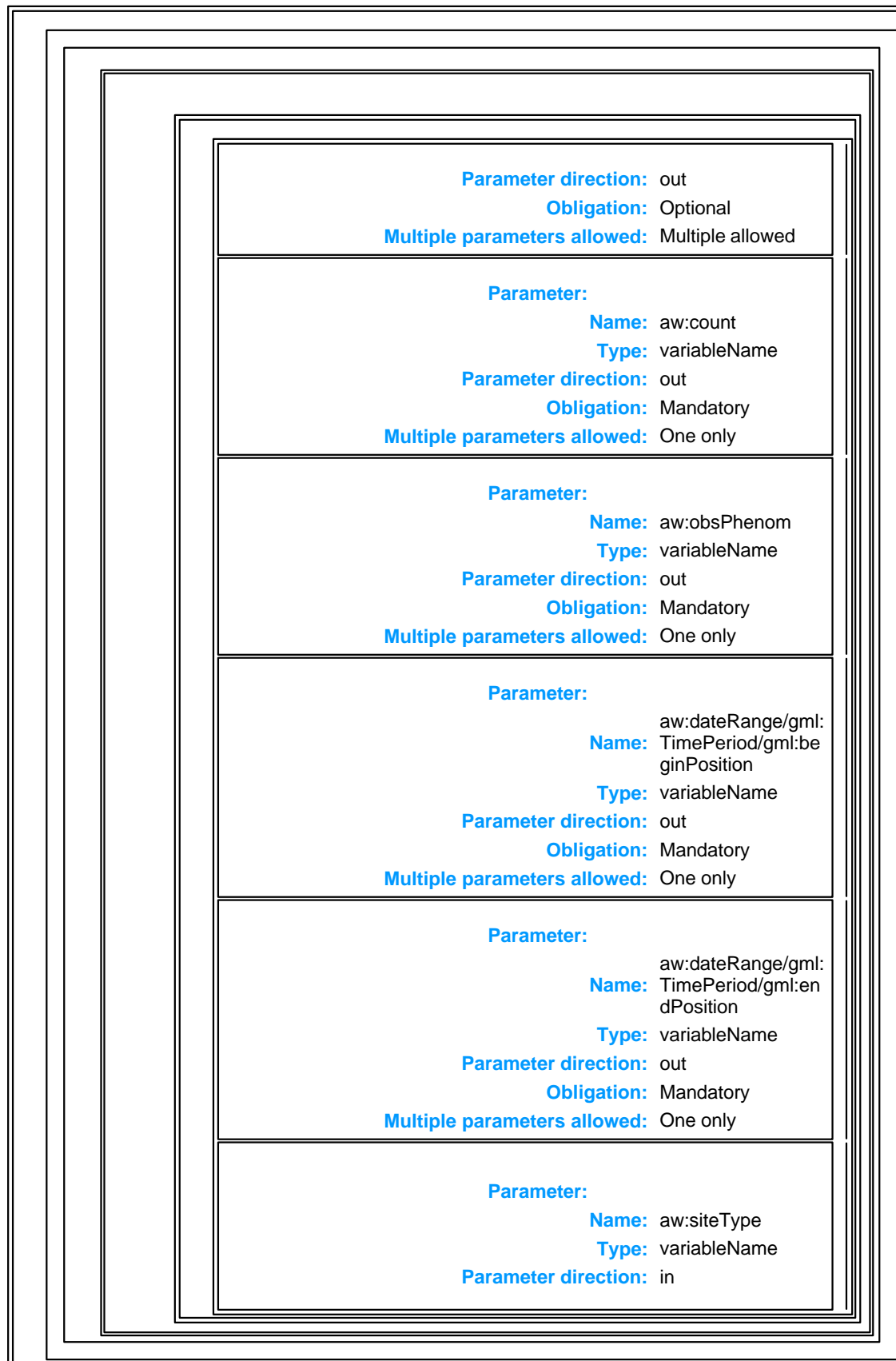
OPERATION:

Operation Name: DAFF BRS AWDI
WFS
Platform: XML
Description: WFS for delivery of
GSO Observations
and Measurements
schemas compliant
results from Bureau
of Rural Sciences
Water Management
Sciences (and its
predecessors) water
data collection
processes, delivered
in accordance with
the Australian Water
Data Infrastructure
processes

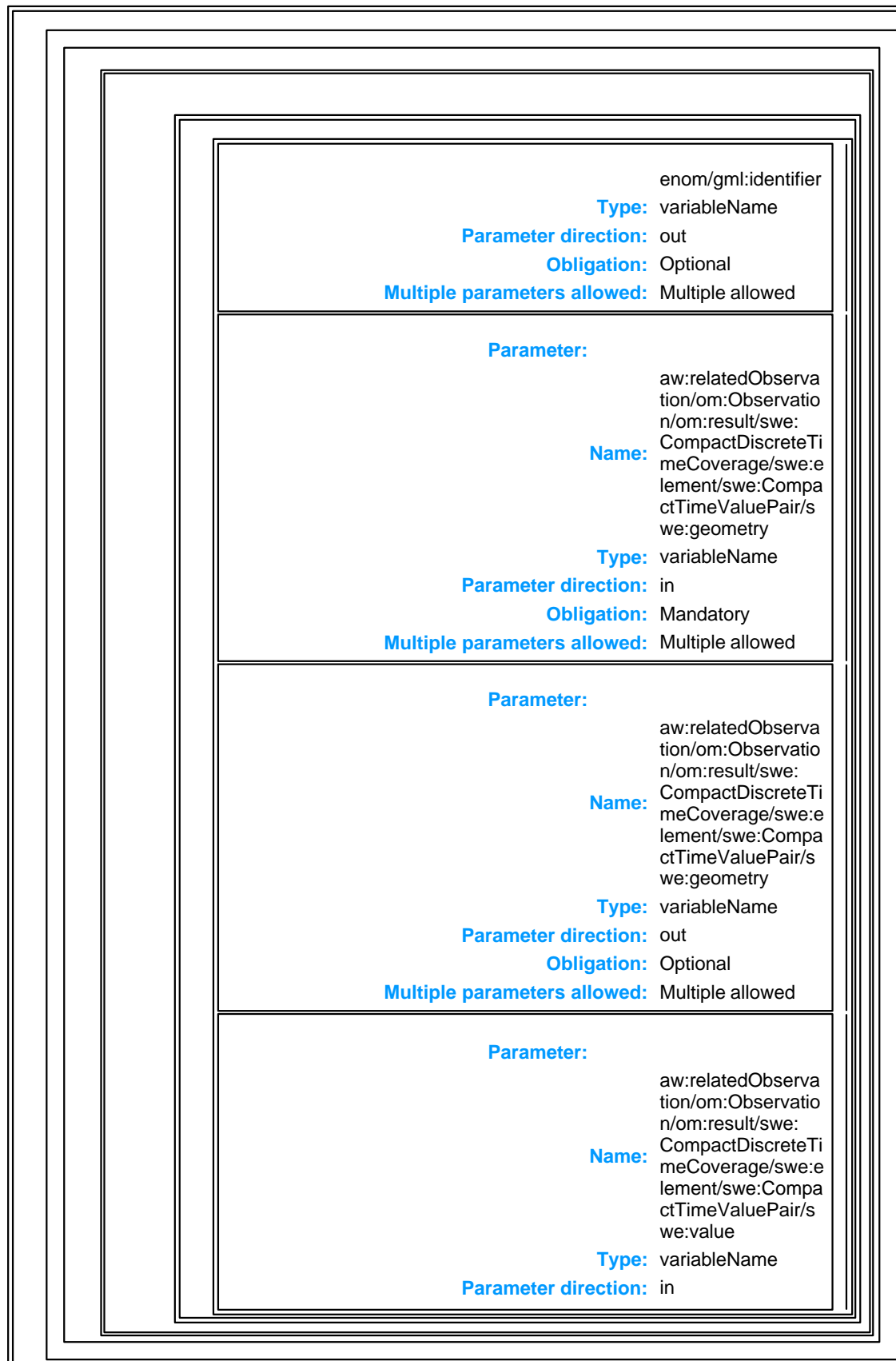
SERVICE PARAMETER(S):

Parameter:

Name: aw:SiteSinglePhen omTimeSeries Type: Query typeName Parameter direction: in Obligation: Mandatory Multiple parameters allowed: One only
Parameter: Name: aw:SingleSiteCoun t Type: Query typeName Parameter direction: in Obligation: Mandatory Multiple parameters allowed: One only
Parameter: Name: gml:name Type: variableName Parameter direction: in Obligation: Mandatory Multiple parameters allowed: Multiple allowed
Parameter: Name: gml:name Type: variableName Parameter direction: out Obligation: Optional Multiple parameters allowed: Multiple allowed
Parameter: Name: aw:samplingRegim eType Type: variableName Parameter direction: in Obligation: Mandatory Multiple parameters allowed: Multiple allowed
Parameter: Name: aw:samplingRegim eType Type: variableName



Obligation: Mandatory Multiple parameters allowed: Multiple allowed
Parameter: Name: aw:siteType Type: variableName Parameter direction: out Obligation: Optional Multiple parameters allowed: Multiple allowed
Parameter: Name: aw:position/gml:Point/gml:coordinates Type: variableName Parameter direction: in Obligation: Mandatory Multiple parameters allowed: Multiple allowed
Parameter: Name: aw:position/gml:Point/gml:coordinates Type: variableName Parameter direction: out Obligation: Optional Multiple parameters allowed: Multiple allowed
Parameter: Name: aw:relatedObservation/om:Observation/om:observedProperty/swe:Phenomenon/gml:identifier Type: variableName Parameter direction: in Obligation: Mandatory Multiple parameters allowed: Multiple allowed
Parameter: Name: aw:relatedObservation/om:Observation/om:observedProperty/swe:Phenomenon/gml:identifier



Obligation: Mandatory Multiple parameters allowed: Multiple allowed	
Parameter:	aw:relatedObservation/om:Observation/om:result/swe:CompactDiscreteTimeCoverage/swe:element/swe:CompactTimeValuePair/swe:value Name:
Type: variableName Parameter direction: out Obligation: Optional Multiple parameters allowed: Multiple allowed	

CONNECTION POINTS(s):	
With Components:	Transfer Option ID = Resource ID = Format ID = Grid Representation ID = Vector Representation ID =
File Location of the Product:	http://adl:brs.gov.au/geoserver/wfs
Access Protocol:	http
Profile for Application Access:	Australian Water Data Infrastructure Department of Agriculture, Fisheries and
Name of the Product:	Forestry Australian Water Data Infrastructure

Web Feature Service	Web Feature Service managed and maintained by Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) that conforms to the Australian Water Data Infrastructure Web Feature Service protocols and schemas
Description of the Product:	information
Service Type:	information

DELIVERS SERVICES FROM:

Data source: http://adl.brs.gov.au/AWDI/metad ata/wd_ awdid9ab_ 92011a01.xm l#ID00_ 9ab

SPATIAL REFERENCING SYSTEMS

Projection: Local Projection Id: RS01
Projection Reference Identifier: EPSG:4393

MANAGEMENT

MAINTENANCE INFORMATION

Maintenance Program
Update Frequency: continual

DATA QUALITY and LINEAGE

PRODUCTS FORMATS

Information about product Format: Format ID = DF92

Format: XML

Version: 1.1

TRANSFER OPTIONS

ON-LINE PRODUCTS

With Components: Transfer
Option ID =
TO01
Format ID =
DF92
Grid
Representation ID = RS01

File Location of the Product: <http://adl.brs.gov.au/geoserver/wfs>

Profile for Application Access: WFS

Department of
Agriculture,
Fisheries and
Forestry
Australian
Water Data
Infrastructure
Web Feature
Service
(DAFF AWDI
WFS)

Name of the Product: Water Data
Infrastructure
Web Feature
Service
(DAFF AWDI
WFS)

Description of the Product: Web Feature
Service to
deliver AG
DAFF water
related data
via the
Australian

Water Data
Infrastructure

OFF-LINE PRODUCTS

[Back to Top](#)

FEATURES of the RESOURCE:

Feature Definition: n:	http://adl.brs.gov.au/AWDI/metadata/awdiServiceFeatures.xml#awSiteSinglePhenomTimeSeries http://adl.brs.gov.au/AWDI/metadata/awdiServiceFeatures.xml#omObservation http://adl.brs.gov.au/AWDI/metadata/awdiServiceFeatures.xml#awSingleSiteCount
------------------------------	---

Information about the product DESCRIPTION (metadata)

Language used in description: eng
Character set used in description: utf8
Description creation date: 2007-08-01

PARTY RESPONSIBLE FOR THE METADATA

Responsible Party Information

PARTY:

Role of responsible party: pointOfContact
Individual responsible for product: BLEYS Evert
Organisation responsible for product: Department of Agriculture,
Fisheries and Forestry
(DAFF) : Bureau of Rural
Sciences (BRS)

Position responsible for product: DAFF : BRS : Biosecurity and Risk Sciences (BRS) : Data Management : Team Leader

ADDRESS:

Delivery point: GPO Box 858
City: Canberra City
State: Australian Capital Territory
Postalcode: 2601
Country: Australia

PHONE NUMBERS

Telephone: +61 2 6272 5627
Fax: +61 2 6272 4687

EMAIL

Address(es): Evert.Bleys@BRS.gov.au

Responsible Party Information

PARTY:

Role of responsible party: distributor
Individual responsible for product: BLEYS Evert
Organisation responsible for product: Department of Agriculture, Fisheries and Forestry: Bureau of Rural Sciences (DAFF BRS)
Position responsible for product: BRS Data Manager

ADDRESS:

Delivery point: GPO Box 858
City: Canberra City
State: Australian Capital Territory
Postalcode: 2601
Country: Australia

PHONE NUMBERS

Telephone: +61 2 6272 5627
Fax: +61 2 6272 4687

EMAIL

Address(es): Evert.Bleys@BRS.gov.au

The XML for the above example is available at

http://anzlic.org.au/metadata/xml/water_data_web_feature_service.xml

8.8 Example 8. Metadata for a 'nonGeographicDataset'

Example : Vacancy rate survey.

This metadata example describes a *Vacancy Rate Survey* which is a 'nonGeographicDataset'. Every quarter, a Housing Rental Vacancy Rates Brief is produced in Queensland that summarises data from a quarterly survey of Queensland real estate agents.

This example shows that traditional non-geographic datasets such as reports, models and software can be usefully described by the ANZLIC Metadata Profile.

::Identification info			
Title	Vacancy Rate Survey		
Date	2005-03-04 (creation)		
::Responsible Party			
Organisation name	Office of Economic and Statistical Research, Queensland Treasury	Voice	+617 3234 0755
Position name		Facsimile	+617 3224 5320
Role	custodian	Delivery point	PO Box 15037, City East
		City	Brisbane
		Administrative area	Queensland
		Postal code	4002
		Country	Australia
		Electronic mail address	joe.bloggs@treasury.qld.gov.au
		Linkage	
Language	eng		
Character set	Utf8		

Abstract	<p>The Housing Rental Vacancy Rates Brief summarises data from a quarterly survey of Queensland real estate agencies. The data presented relates to vacancy rates of residential rental detached houses and units, and is broken down by 5 regions: Inner Brisbane, Remainder of Brisbane LGA, Brisbane Surrounds, Gold Coast and Rest of Queensland. Information on each quarter is posted on the website according to the following schedule: March Quarter—first week of April June Quarter—first week of July September Quarter—first week of October December Quarter—first week of January . Surveys have been conducted in 2002-2003, 2003-2004, 2004-2005, 2005-2006, and 2006-2007.</p> <p>Surveys provide a means of measuring a population's characteristics, self-reported and observed behaviour, awareness of programs, attitudes or opinions, and needs. Repeating surveys at regular intervals can assist in the measurement of changes over time. These types of information are invaluable in planning and evaluating Government policies and programs. The objective of this survey of agents was to measure vacancy rates for residential rental accommodation in Queensland, and to determine the balance between demand and supply of rental accommodation throughout Queensland</p>
Purpose	
Status	onGoing
Topic category	society
Descriptive keywords	Housing , Survey (theme)
::Extent	
Description	State of Queensland
::Temporal	
Begin date	2005-07-01
End date	2015-12-31
Use limitation	Must acknowledge this report if it is used for further analysis.
Use constraints	limitation not listed
Other constraints	http://www.nrw.qld.gov.au/products/access_pricing/pdfs/sample_open_licence_single_use.pdf.
Maintenance and update frequency	Data is updated every three months
::Distribution info	
Distribution format	Adobe Portable Document Format (PDF)

Distribution version	Adobe Acrobat 7.0		
Format			
distributor			
Organisation name	Office of Economic And Statistical Research		
Position name	Queensland Treasury	Voice	+617 3234 0755
Role	Team Leader	Facsimile	+617 3224 5320
		Delivery point	PO Box 15037, City East
		City	Brisbane
		Administrative area	Queensland
		Postal code	4002
		Country	Australia
		Electronic mail address	joe.bloggs@treasury.qld.gov.au
		Linkage	
		Contact instructions	

The XML for the above example is available at
http://anzlic.org.au/metadata/xml/vacancy_rate_survey.xml

9. Glossary

For the purpose of this document, the following terms and definitions apply.

Definitions

AGLS

Formerly known as Australian Government Locator Service (a metadata standard based on Dublin Core).

ANZLIC

ANZLIC - the Spatial Information Council for Australia and New Zealand (formerly known as Australia New Zealand Land Information Council).

AS/NZS

Joint Australian Standard /New Zealand Standard.

Document Type Definition (DTD)

A DTD defines an XML document structure with a list of legal elements and attributes.

dataset *[AS/NZS ISO 19115:2005]*

Identifiable collection of data.

NOTE A dataset may be a smaller grouping of data which, though limited by some constraint such as spatial extent or feature type, is located physically within a larger dataset. Theoretically a dataset may be as small as a single feature or feature attribute contained within a larger dataset. A hardcopy map or chart may be considered a dataset.

dataset series *[AS/NZS ISO 19115:2005]*

Collection of datasets sharing the same product specification.

eXtensible Markup Language (XML)

Open standard for describing data and defining data elements on a Web page and business-to-business documents.

eXtensible Stylesheet Language (XSL)

A language for creating a style sheet to describe how data sent over the Web in XML is to be presented to the user. - It presents data in identified fields. - Will transform existing ANZLIC V2.0 metadata into new ANZLIC Profile (ISO 19139) compliant XML.

eXtensible Stylesheet Transformation Language (XSLT)

Software to convert an XML document into another format such as HTML, PDF or text.

feature

Abstraction of real world phenomena *[AS/NZS ISO 19101:2003]*

Geography Markup Language GML *[AS/NZS ISO 19106:2006]*

base standard

ISO geographic information standard or other information technology standard that is used as a source from which a profile may be constructed.

Interface Definition Language (IDL)

A language allowing a program or object written in one language to communicate with another

IEC

International Electrotechnical Commission

ISO

International Organization for Standardization

ISO/TC211

ISO Technical Committee for Geographic information/Geomatics

IT-004

Standards Australia/Standards New Zealand Technical Committee for Geographic information/Geomatics

(Australian/New Zealand national equivalent of ISO/TC211)

instantiated

An abstract concept represented by a tangible example.

Metadata Entry and Search Tool (MEST).

Software tool(s) that facilitate the translation, creation and validation of new metadata records.

metadata

Data about data [AS/NZS ISO 19115:2005]

metadata element

Discrete unit of metadata [AS/NZS ISO 19115:2005]

NZGLS

New Zealand Government Locator Service (a metadata standard based on Dublin Core)

Object Constraint Language (OCL)

A subset of the Unified Modeling Language, allowing software developers to specify constraints over the objects in a model.

profile

Set of one or more base standards or subsets of base standards, and, where applicable, the identification of chosen clauses, classes, options and parameters of those base standards, that are necessary for accomplishing a particular function. [AS/NZS ISO 19106:2006]. NOTE: A profile is derived from base standards so that by definition, conformance to a profile is conformance to the base standards from which it is derived.

resource [AS/NZS ISO 19115:2005]

Asset or means that fulfils a requirement.

Example : Dataset, service, document, person or organization.

Standard Generalised Markup Language SGML

A form of document type definition (DTD). A SGML is a standard for specifying a document markup language or a tag set.

Simple Unstructured Text Record Syntax (SUTRS)

A data exchange format widely used in Z39.50

SCHEMATRON

Tool to implement the ANZLIC metadata profile by processing AS/NZS ISO 19115 conditional

statements.

Unified Modelling Language (UML)

An object-oriented analysis and design language.

Xml Schema Definition (XSD)

An XML-based language used to describe and control XML document contents. - Will validate the metadata records and prove compliance with the new ANZLIC Profile.

Z39.50

OSI client/server-based protocol.

10. Annex A : ANZLIC Metadata Profile

The ANZLIC Metadata Profile

The background to the ANZLIC Metadata Profile and the main features of the Profile are described briefly in earlier sections of this Guidelines document (see Sections 2 and 3.3).

The Guidelines document is a supplementary document to the ANZLIC Metadata Profile and must be read in conjunction with the Profile. The following extracts are from section “6 Requirements” of the Profile and are provided in this Annex for ease of reference. The numbering of the extracts is the numbering used in the Profile.

Extracts from ANZLIC Metadata Profile

6.1 Metadata for describing geographic data and other resources

The Profile identifies the metadata required to describe digital geographic data and other types of resources. Metadata is applicable to independent datasets, aggregations of datasets, individual geographic features and the various classes of objects that comprise a resource.

Metadata shall be implemented for the Profile by the creation of XML document instances that are validated against the ANZLIC Metadata Profile XSDs, Schematron and relevant code lists and enumerations.

To produce a metadata record that conforms to the Profile a minimum set of metadata elements (elements that are either mandatory or become mandatory under certain conditions) must be completed for both geographic datasets and other resources (see Section 6.3). Completion of this minimum requirement will provide a baseline metadata record that will conform to the Profile.

ANZLIC has identified additional elements that will enhance the description of geographic datasets, in particular for discovery. This set of metadata, comprising the minimum metadata for geographic datasets and some additional optional elements, is referred to as core metadata for geographic datasets (see Section 0). ANZLIC strongly recommends completion of the core metadata for geographic datasets.

In addition to the core, the Profile encompasses a large number of other elements that may be used to describe resources in more detail. Completing these elements can aid a range of uses including evaluation of the resource’s fitness for purpose, and enabling applications to discover and transact directly with a resource. ANZLIC encourages completion of as many metadata elements as possible in order to better describe the resource.

6.2 Obligations/conditions

An obligation/condition is a descriptor indicating whether a metadata entity or metadata element shall always be documented in the metadata or sometimes be documented (i.e. contains value(s)). This descriptor may have the following values: M (mandatory), C (conditional) or O (optional). The following definitions for these values have been sourced from B.1.5 Obligation/Condition (Annex B, AS/NZS ISO 19115:2005).

A **mandatory (M)** obligation means the metadata entity or metadata element shall be documented.

A **conditional (C)** obligation specifies an electronically manageable condition under which at least one metadata entity or a metadata element is mandatory. ‘Conditional’ is used for one of the three following possibilities:

- Expressing a choice between two or more options. At least one option is mandatory and must be documented.
- Documenting a metadata entity or a metadata element if another element has been documented.
- Documenting a metadata element if a specific value for another metadata element has been documented.

If the answer to the condition is positive, then the metadata entity or the metadata element shall be mandatory.

An **optional (O)** obligation means that the metadata entity or the metadata element may be documented or may not be documented. Optional metadata entities and optional metadata elements have been defined to provide a guide to those looking to fully document their data. (Use of this common set of defined elements will help promote interoperability among geographic data users and producers world-wide.) If an optional entity is not used, the elements contained within that entity (including mandatory elements) will also not be used. **Optional entities may have mandatory elements; those elements only become mandatory if the optional entity is used.**

6.3 Minimum metadata requirements

The minimum requirements for recording metadata to describe geographic datasets and other resources are those metadata elements that shall be completed in order to conform to the Profile. It should be noted that the obligation for some metadata elements is conditional and only becomes mandatory under certain conditions.

Table 1 identifies the metadata elements that shall be completed for datasets and other resources. Minimum metadata for describing geographic datasets also form part of the core metadata for geographic datasets (see Table 2).

Note that the obligations of some elements are dependent on the stated *hierarchyLevel*.

NOTE The ANZLIC Metadata Profile imposes a more stringent obligation for the metadata element *fileIdentifier* than the AS/NZS ISO 19115:2005. The obligation was made mandatory to assist with implementation of the Profile.

Table 1 - Minimum for geographic datasets and other resources

Name	Path	Data sets	Other resources
Metadata file identifier	MD_Metadata.fileIdentifier	M	M
Metadata language	MD_Metadata.language	C ^a	C ^a
Metadata character set	MD_Metadata.characterSet	C ^b	C ^b
Metadata file parent identifier	MD_Metadata.parentIdentifier	C ^c	C ^c
Metadata hierarchy level	MD_Metadata.hierarchyLevel	O ^d	M ^e

Name	Path	Data sets	Other resources
Metadata hierarchy level name	MD_Metadata.hierarchyLevelName	O ^f	M ^{e, g}
Metadata contact individual name	MD_Metadata.contact > CI_ResponsibleParty.individualName	C ^h	C ^h
Metadata contact organisation	MD_Metadata.contact > CI_ResponsibleParty.organisationName	C ⁱ	C ⁱ
Metadata contact position	MD_Metadata.contact > CI_ResponsibleParty.positionName	C ^j	C ^j
Metadata contact role	MD_Metadata.contact > CI_ResponsibleParty.role > CI_RoleCode	M	M
Metadata date stamp	MD_Metadata.dateStamp	M	M
Resource title	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.title	M	M ^k
Resource reference date	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.date > CI_Date.date	M	M ^k
Resource reference date type	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.date > CI_Date.dateType > CI_DateTypeCode	M	M ^k
Abstract describing the resource	MD_Metadata.identificationInfo > MD_DataIdentification.abstract	M	M ^k
Resource language	MD_Metadata.identificationInfo > MD_DataIdentification.language	M	C ^l
Resource character set	MD_Metadata.identificationInfo > MD_DataIdentification.characterSet	C ^m	C ^m
Topic category	MD_Metadata.identificationInfo > MD_DataIdentification.topicCategory	M	C ⁿ
Geographic location of the resource (by description)	MD_Metadata.identificationInfo > MD_DataIdentification.extent > EX_Extent > EX_GeographicDescription.geographicIdentifier > MD_Identifier.code	C ^{o, p}	O ^p
West longitude	MD_Metadata.identificationInfo > MD_DataIdentification.extent > EX_Extent > EX_GeographicBoundingBox.westBoundLongitude	C ^{o, p}	O ^p
East longitude	MD_Metadata.identificationInfo > MD_DataIdentification.extent > EX_Extent > EX_GeographicBoundingBox.eastBoundLongitude	C ^{o, p}	O ^p

Name	Path	Data sets	Other resources
South latitude	MD_Metadata.identificationInfo > MD_DataIdentification.extent > EX_Extent > EX_GeographicBoundingBox.southBoundLatitude	C ^{o, p}	O ^p
North latitude	MD_Metadata.identificationInfo > MD_DataIdentification.extent > EX_Extent > EX_GeographicBoundingBox.northBoundLatitude	C ^{o, p}	O ^p

- a language: documented if not defined by the encoding process
- b characterSet: documented if ISO 10646-1, Information technology — Universal Multiple-Octet Coded Character Set (UCS) is not used and not defined by the encoding process
- c parentIdentifier: documented if the hierarchy of a higher level exists
- d hierarchyLevel: assumed to be 'dataset' if MD_Metadata.hierarchyLevel is omitted
- e hierarchyLevel: documented if hierarchyLevel not = 'dataset'
- f hierarchyLevelName: assumed to be 'dataset' if MD_Metadata.hierarchyLevelName is omitted
- g hierarchyLevelName: documented if hierarchyLevel not = 'dataset'
- h individualName: documented if 'organisationName' and 'positionName' not documented
- i organisationName: documented if 'individualName' and 'positionName' not documented
- j positionName: documented if 'individualName' and 'organisationName' not documented
- k MD_ServiceIdentification may be used instead of MD_DataIdentification if hierarchyLevel = 'service'
- l only used if MD_DataIdentification has been used
- m characterSet: documented if ISO 10646-1 is not used
- n topicCategory: if hierarchyLevel = 'series' topicCategory is mandatory
- o for a geographic dataset, include metadata for the geographic bounding box (West longitude, East longitude, South latitude and North latitude) or the geographic description identifier (ANZLIC prefers the use of geographic bounding box — see Section 6.5.3)
- p if any one of west longitude, east longitude, south latitude or north latitude exists, then the remaining three must also be completed

Core metadata for datasets

AS/NZS ISO 19115:2005 defines an extensive set of metadata elements; though typically only a subset of the full number of elements is used. It is essential that a minimum number of metadata elements be maintained for a dataset (Table 1); however, when describing geographic datasets, ANZLIC recommends the use of metadata in addition to the minimum requirements for geographic datasets. This set of metadata, which includes the minimum set of metadata and some additional optional elements, is referred to as core metadata. Table 2 lists the core metadata required to describe a dataset, typically for catalogue purposes. This list contains metadata answering the following questions:

'Does a dataset on a specific topic exist ("what")?'

- 'For a specific place ("where")?'
- 'For a specific date or period ("when")?'
- 'A point of contact to learn more about or order the dataset ("who")?'

By using the core metadata recommended in the Profile interoperability will be enhanced, allowing users to understand without ambiguity the geographic data and the related metadata provided by

either the producer or the distributor. Additional metadata elements provided by either the producer or the distributor also allow users to more clearly evaluate the characteristics of geographic datasets.

Table 2 - Core metadata for geographic datasets

Name	Path	Obligation
Metadata file identifier	MD_Metadata.fileIdentifier	M ^a
Metadata language	MD_Metadata.language	C ^b
Metadata character set	MD_Metadata.characterSet	C ^c
Metadata file parent identifier	MD_Metadata.parentIdentifier	C ^d
Metadata point of contact	MD_Metadata.contact > CI_ResponsibleParty	M
Metadata date stamp	MD_Metadata.dateStamp	M
Metadata standard name	MD_Metadata.metadataStandardName	O
Metadata standard version	MD_Metadata.metadataStandardVersion	O
Dataset title	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.title	M
Dataset reference date	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.date	M
Abstract describing the data	MD_Metadata.identificationInfo > MD_DataIdentification.abstract	M
Dataset responsible party	MD_Metadata.identificationInfo > MD_DataIdentification.pointOfContact > CI_ResponsibleParty	O
Spatial representation type	MD_Metadata.identificationInfo > MD_DataIdentification.spatialRepresentationType	O
Spatial resolution of the dataset	MD_Metadata.identificationInfo > MD_DataIdentification.spatialResolution > MD_Resolution.distance or MD_Resolution.equivalentScale	O ^e
Dataset language	MD_Metadata.identificationInfo > MD_DataIdentification.language	M
Dataset character set	MD_Metadata.identificationInfo >	C ^f

Name	Path	Obligation
	MD_DataIdentification.characterSet	
Dataset topic category	MD_Metadata.identificationInfo > MD_DataIdentification.topicCategory	M
Geographic location of the dataset (by four coordinates or by description)	MD_Metadata.identificationInfo > MD_DataIdentification.extent > EX_Extent > EX_GeographicBoundingBox or EX_GeographicDescription	C ^{g, h}
Temporal extent information for the dataset	MD_Metadata.identificationInfo > MD_DataIdentification.extent > EX_Extent.temporalElement	O
Vertical extent information for the dataset	MD_Metadata.identificationInfo > MD_DataIdentification.extent > EX_Extent.verticalElement > EX_VerticalExtent	O
Lineage	MD_Metadata.dataQualityInfo > DQ_DataQuality.lineage > LI_Lineage	O
Reference system	MD_Metadata.referenceSystemInfo > MD_ReferenceSystem.referenceSystemIdentifier > RS_Identifier	O
Distribution Format	MD_Metadata.distributionInfo > MD_Distribution > MD_Format	O
On-line resource	MD_Metadata.distributionInfo > MD_Distribution > MD_DigitalTransferOption.onLine > CI_OnlineResource	O

a. the Profile imposes a mandatory obligation on the metadata element fileIdentifier

b. language: documented if not defined by the encoding process

c. characterSet: documented if ISO 10646-1, Information technology — Universal Multiple-Octet Coded Character Set (UCS) is not used and not defined by the encoding process

d. documented if a higher level of hierarchy level exists (e.g. if the geographic 'dataset' is part of a 'series')

e. distance is preferred over equivalentScale because the scale will change when presented at different sizes on a screen

f. characterSet: documented if ISO 10646-1 is not used

g. include either the geographic bounding box (extents) or the geographic description (ANZLIC prefers the use of geographic bounding box — see Section 6.5.3)

h. if any one of west longitude, east longitude, south latitude or north latitude exists, then the remaining three must also be completed

Source: Adapted from Table 3 Core metadata for geographic datasets (AS/NZS ISO 19115:2005).

11. Annex B : Mappings

11.1 Mapping ANZLIC Metadata Profile Elements to AGLS & NZGLS

The AGLS (Australian Government Locator Service) and the NZGLS (New Zealand Government Locator Service) are both based on the relatively simple international Dublin Core metadata standard. Some jurisdictions are required to produce AGLS / NZGLS metadata for the data resources they manage. As a consequence, there may be a need to transform a metadata description prepared in terms of the ANZLIC Metadata Profile into the AGLS / NZGLS format. In order to allow software transformations and avoid manual editing, care needs to be taken when preparing (and maintaining) a metadata description to ensure that all the necessary ANZLIC Metadata Profile elements are completed and that any additional encoding details are added. - ANZLIC provides a mapping between the ANZLIC Metadata Profile and the AGLS and NZGLS.

The following table identifies all 19 AGLS /NZGLS elements and the equivalent ANZLIC metadata element.

- AGLS obligations have been sourced from the Australian Standard AS 5044 (and not the Australian Government AGLS which is derived from the standard).
- At the time this information was prepared, the Dublin Core metadata elements set on which both AGLS and NZGLS are based, was being amended. A ballot is expected in March 2007. A review of AS 5044 will follow, although it is not anticipated that this will result in any significant changes to AS 5044.
- When creating AGLS/NZGLS metadata from ANZLIC, one or more mapping options are provided for each of the 19 AGLS/NZGLS elements.
- Creating ANZLIC metadata from AGLS/NZGLS does not meet the minimum requirements for ANZLIC and will not necessarily result in a compliant ANZLIC metadata. This is due to the ANZLIC Metadata Profile being more detailed and complex than the AGLS/NZGLS metadata elements set.

This mapping applies to data and does not consider services. When mapping to services, other elements may need to be considered.

Explanation of symbols used in the following table:

← Mapping from ANZLIC Metadata Profile to AGLS only

→ Mapping from AGLS to ANZLIC Metadata Profile only

↔ Mapping available both ways (from ANZLIC Metadata Profile to AGLS and vice versa)

>> Indicates that multiple path options are available to map to the metadata element (pathways are illustrated in the UML diagrams)

Table B1. Mapping ANZLIC Metadata Profile Elements to AGLS & NZGLS

AGLS / NZGLS	ANZLIC METADATA PROFILE			
Metadata element and obligation	Path (as represented in the ISO 19115 UML diagrams)	Mapping	ANZLIC obligation	Explanatory notes
Creator	Dataset responsible party			
AGLS: Mandatory (if known) NZGLS:	MD_Metadata.identificationInfo > MD_DataIdentification.pointOfContact > CI_ResponsibleParty	←	Optional	No AGLS qualifier exists for Creator.

AGLS / NZGLS	ANZLIC METADATA PROFILE			
Metadata element and obligation	Path (as represented in the ISO 19115 UML diagrams)	Mapping	ANZLIC obligation	Explanatory notes
Mandatory	[where role = 'originator' or 'resourceProvider' or 'principalInvestigator']			
	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.citedResponsibleParty > CI_ResponsibleParty [when role = 'originator' or 'resourceProvider' or 'principalInvestigator']	↔	Optional	No AGLS qualifier exists for Creator.
Date AGLS: Mandatory NZGLS: Recommended	Dataset reference date			
	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.date > CI_Date.date and .dateType	↔	Mandatory	This mapping is the preferred option. The following relationships apply when mapping the Date element between ANZLIC and AGLS: <ul style="list-style-type: none"> 'publication' (ISO 19115) = 'issued' (AGLS) 'creation' (ISO 19115) = 'created' (AGLS) 'revision' (ISO 19115) = 'modified' (AGLS) No ANZLIC equivalent exists where AGLS Date qualifier = 'valid'.
	MD_Metadata.distributionInfo > MD_Distribution >> MD_Distributor.distributionOrderProcess > MD_StandardOrderProcess.plannedAvailableDate Time > DateTime	⌊	Optional	This mapping can also apply when AGLS Date qualifier = 'issued'.
Description AGLS: Optional NZGLS: Recommended	Abstract describing the data			
	MD_Metadata.identificationInfo > MD_DataIdentification.abstract	↔	Mandatory	Used when describing abstracts.
	MD_Metadata.identificationInfo > MD_DataIdentification.graphicOverview > MD_BrowseGraphic.fileName	⌊	Optional	Used when describing graphics, i.e. a graphic that provides an illustration of the data (e.g. a thumbnail graphic).
Title AGLS: Mandatory NZGLS: Mandatory	Dataset title			
	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.title	↔	Mandatory	This mapping is the preferred option.

AGLS / NZGLS	ANZLIC METADATA PROFILE			
Metadata element and obligation	Path (as represented in the ISO 19115 UML diagrams)	Mapping	ANZLIC obligation	Explanatory notes
	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.alternateTitle	↔	Optional	This mapping is optional and used where AGLS Title qualifier = 'alternative' and the ANZLIC element 'alternateTitle' applies.
Type AGLS: Optional NZGLS: Mandatory (with the refinement Category)	Representation form			
	MD_Metadata.heirarchyLevel > MD_ScopeCode	⊂	Mandatory unless describing a 'dataset'	This mapping is the preferred option. When mapping from ANZLIC to AGLS set the scheme to be the URL for the ISO 19115 MD_ScopeCodeodelist. Available ISO 19115 values include: attribute, attributeType, collectionHardware, collectionSession, dataset, series, nonGeographicDataset, dimensionGroup, feature, featureType, propertyType, fieldSession, software, service, model, tile.
	MD_Metadata.identificationInfo > MD_DataIdentification.spatialRepresentationType > MD_SpatialRepresentationTypeCode	⊂	Optional	When mapping from ANZLIC to AGLS set the scheme to be the URL for the ISO 19115 MD_SpatialRepresentationTypeCodeodelist. Available values for MD_SpatialRepresentationTypeCode code list: 'vector', 'grid', 'textTable', 'tin', 'stereoModel', 'video'.
Function AGLS: Mandatory if no <i>Subject</i> element specified. NZGLS: Mandatory.	Purpose			
	MD_Metadata.identificationInfo > MD_DataIdentification.purpose	↔	Optional	If metadata record is not 'dataset' or 'series' then either the 'purpose' or 'topicCategory' or 'keyword' are necessary to comply with AGLS.
Subject	Keywords			

AGLS / NZGLS		ANZLIC METADATA PROFILE		
Metadata element and obligation	Path (as represented in the ISO 19115 UML diagrams)	Mapping	ANZLIC obligation	Explanatory notes
AGLS: Mandatory if no <i>Function</i> element specified NZGLS: Mandatory.	MD_Metadata.identificationInfo > MD_DataIdentification.topicCategory > MD_TopicCategoryCode			
	MD_Metadata.identificationInfo > MD_DataIdentification.descriptiveKeywords > MD_Keywords.keyword	↔	Optional	When mapping from ANZLIC to AGLS set the scheme to be the URL for the thesaurus (or controlled vocabulary). If 'type' exists in ANZLIC then 'type' must = 'discipline' or 'theme'.
Availability AGLS: Mandatory for offline resources (i.e. no <i>Identifier</i> element) NZGLS: Conditional – mandatory when adding an agency, service or offline document; optional when adding an online document NOTE: (i) Insufficient qualifiers to determine mapping from AGLS to ANZLIC. (ii) For online resources provide URL for AGLS Identifier element.	Distribution			
	MD_Metadata.distributionInfo > MD_Distribution.distributor > MD_Distributor.distributorContact > CI_ResponsibleParty	⌊	Optional	
	MD_Metadata.distributionInfo > MD_Distribution.distributor > MD_Distributor.distributionOrderProcess > MD_StandardOrderProcess.orderingInstructions or MD_StandardOrderProcess.fees or MD_StandardOrderProcess.turnaround	⌊	Optional	
	MD_Metadata.identificationInfo >> .pointOfContact > CI_ResponsibleParty	⌊	Optional	This element can be mapped via MD_DataIdentification or SV_ServiceIdentification.
	MD_Metadata.identificationInfo >> .citation > CI_Citation.citedResponsibleParty > CI_ResponsibleParty [when role = 'distributor' or 'resourceProvider' or 'pointOfContact']	⌊	Optional	This element can be mapped via MD_DataIdentification or SV_ServiceIdentification.
	MD_Metadata.contact > CI_ResponsibleParty.individualName or CI_ResponsibleParty.positionName or CI_ResponsibleParty.organisationName	⌊	Mandatory	If resource point of contact or cited responsible party are not provided then use this option.
Identifier AGLS: Mandatory for online resources (i.e. no <i>Availability</i> element) NZGLS: Conditional – mandatory for	Resource URI			
	MD_Metadata.dataSetURI	↔	Optional	This option is preferred for online resources. ANZLIC metadata record must be completed in order to comply with the minimum AGLS requirement.

AGLS / NZGLS	ANZLIC METADATA PROFILE			
Metadata element and obligation	Path (as represented in the ISO 19115 UML diagrams)	Mapping	ANZLIC obligation	Explanatory notes
online resources, otherwise recommended where available. Not used for services.	MD_Metadata.distributionInfo > MD_Distribution.>> MD_DigitalTransferOptions.onLine > CI_OnlineResource.linkage	└	Optional	Use for online resources where the URL for accessing the resource is provided. This element can be mapped via MD_Distribution.distributionFormat or MD_Distribution.distributor or MD_Distribution.transferOptions.
	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.ISBN or CI_Citation.ISSN	↔	Optional	Use for publications where an ISBN or ISSN is provided. NOTE: (i) When mapping from AGLS to ANZLIC: if AGLS element 'identifier' includes 'ISBN' or 'ISSN' in character string, or declares ISBN or ISSN as the encoding scheme then map to the ISO19115 'ISBN' or 'ISSN' respectively. (ii) When mapping from ANZLIC to AGLS: ensure that 'ISBN' or 'ISSN' are included in the character string, otherwise declare ISBN or ISSN as the encoding scheme.
	MD_Metadata.identificationInfo >> .citation > CI_Citation.identifier > MD_Identifier.code	↔	Optional	Use this option when mapping from AGLS to ANZLIC, and no URI, URL, ISBN or ISSN has been provided. This element can be mapped via MD_DataIdentification or SV_ServiceIdentification.
Publisher AGLS: Mandatory for information resources NZGLS: Conditional – mandatory for document resources	Resource responsible party			
	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.citedResponsibleParty > CI_ResponsibleParty [where role = 'publisher' or 'distributor' or 'resourceProvider']	└ where role = 'resource Provider' or ↔	Optional	When resource is described as a 'service' then two way mapping is possible where ANZLIC role = 'distributor' and AGLS element = 'publisher'.

AGLS / NZGLS		ANZLIC METADATA PROFILE		
Metadata element and obligation	Path (as represented in the ISO 19115 UML diagrams)	Mapping	ANZLIC obligation	Explanatory notes
		where role = 'distributor' or 'publisher'		
	MD_Metadata.identificationInfo > MD_DataIdentification.pointOfContact > CI_ResponsibleParty [where role = 'publisher']	↔	Optional	Identification of the <i>Publisher</i> would need to be included. As ANZLIC pointOfContact is not necessarily the same as AGLS Publisher, then its only possible to map one way from ANZLIC to AGLS.
	MD_Metadata.contact > CI_ResponsibleParty.individualName or CI_ResponsibleParty.positionName or CI_ResponsibleParty.organisationName	⌊	Mandatory	If resource pointOfContact or citedResponsibleParty are not provided then use this option.
Audience AGLS: Optional NZGLS: Recommended	User			
	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.citedResponsibleParty > CI_ResponsibleParty.individualName or CI_ResponsibleParty.organisationName or CI_ResponsibleParty.positionName [when role = 'user']	⌊	Optional	These mappings are not ideal; however, constraints is probably the best option available.
Coverage AGLS: Optional NZGLS: Optional	Geographic Extent			
	MD_Metadata.identificationInfo > MD_DataIdentification.extent > EX_Extent.geographicElement > EX_GeographicDescription.geographicIdentifier > MD_Identifier.code	↔	Conditional, if Geographic Bounding Box not provided; and describing a 'dataset'	Use where AGLS Coverage qualifier = 'spatial' and subject to the encoding scheme having latitude/longitude values. Not possible to map unqualified AGLS Coverage element to ANZLIC and must be qualified by a recognised ANZLIC encoding scheme. Mapping both ways is possible where AGLS qualifier = 'spatial' and providing the encoding scheme has latitude/longitude values. Reference to qualifiers, including scheme attribution, is essential when mapping from ANZLIC to AGLS.

AGLS / NZGLS	ANZLIC METADATA PROFILE			
Metadata element and obligation	Path (as represented in the ISO 19115 UML diagrams)	Mapping	ANZLIC obligation	Explanatory notes
	MD_MetadataIdentification > MD_DataIdentification.extent > EX_Extent.geographicElement > EX_GeographicBoundingBox.westBoundLongitude and .eastBoundLongitude and .southBoundLatitude and .northBoundLatitude	└	Conditional, if describing a 'dataset' and geographic Description is not used	(i) use where AGLS Coverage qualifier = 'spatial' (ii) reference to qualifiers, including scheme attribution, is essential when mapping from ANZLIC to AGLS (iii) when mapping from ANZLIC to AGLS, add W, E, S, N to coordinates
	MD_MetadataIdentification > MD_DataIdentification.extent > EX_Extent.geographicElement > EX_BoundingPolygon.polygon > GM_Object	└	Optional	Use where AGLS Coverage qualifier = 'spatial'. Reference to qualifiers, including scheme attribution, is essential when mapping from ANZLIC to AGLS. The bounding polygon is represented by a string of lat/long coordinates where the first coordinate equals the last coordinate.
	MD_MetadataIdentification > MD_DataIdentification.extent > EX_Extent.verticalElement > EX_VerticalExtent.minimumValue and .maximumValue and .verticalCRS...	└	Optional	Use where AGLS Coverage qualifier = 'spatial'. Reference to qualifiers, including scheme attribution, is essential when mapping from ANZLIC to AGLS. Refer to ISO 19111 for definition of verticalCRS.
	MD_Metadata.identificationInfo > MD_DataIdentification.extent > EX_Extent.temporalElement > EX_TemporalExtent.extent > TM_Primitive	↔	Optional	Use where AGLS Coverage qualifier = 'temporal'. Mapping both ways is only possible when the values representing date and time comply with the ISO 8601 scheme.

AGLS / NZGLS		ANZLIC METADATA PROFILE		
Metadata element and obligation	Path (as represented in the ISO 19115 UML diagrams)	Mapping	ANZLIC obligation	Explanatory notes
	MD_Metadata.identificationInfo > MD_DataIdentification.descriptiveKeywords > MD_Keywords.keyword	↔	Optional	Use where AGLS Coverage qualifier = 'temporal' or 'postcode'. Where AGLS Coverage qualifier = 'temporal', the values representing date and time must comply with the ISO 8601 scheme. Where AGLS Coverage qualifier = 'postcode', the mapping from ANZLIC to AGLS only relevant when Australia or New Zealand postcode is thesaurus name for ANZLIC and scheme name for AGLS.
Language AGLS: Optional NZGLS: Recommended	Resource language			
	MD_Metadata.identificationInfo > MD_DataIdentification.language	↔	Mandatory	Variations exist between AGLS and ANZLIC as to how information provided for 'language' is recorded. AGLS recommend the use of RFC 3066 —a combination of ISO 639-1 and ISO 3166 (where a two letter language code does not exist then ISO 639-2 is used). ANZLIC is likely to use ISO 639-2.
Contributor AGLS: Optional NZGLS: Optional	Contributor			
	MD_Metadata.identificationInfo > MD_DataIdentification.credit	↔	Optional	The simplest option.
	MD_Metadata.identificationInfo > MD_DataIdentification.pointOfContact > CI_ResponsibleParty [where role = 'principalInvestigator' or 'processor' or 'resourceProvider']	⊂	Optional	

AGLS / NZGLS	ANZLIC METADATA PROFILE			
Metadata element and obligation	Path (as represented in the ISO 19115 UML diagrams)	Mapping	ANZLIC obligation	Explanatory notes
	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.citedResponsibleParty > CI_ResponsibleParty [where role = 'principalInvestigator' or 'processor' or 'resourceProvider']	└	Optional	The appropriate value for <i>role</i> needs consideration when using CI_ResponsibleParty
Format AGLS: Optional NZGLS: Optional	Distribution format			
	MD_Metadata.identificationInfo > MD_DataIdentification.resourceFormat > MD_Format.name and .version	└	Optional	Format in this context is equivalent to the native (or originating) file format of the resource. This format may not be available to the end user. When mapping from ANZLIC to AGLS, concatenate 'name' and 'version'.
	MD_Metadata.distributionInfo > MD_Distribution. >> MD_Format.name and .version	└	Optional	The format(s) that data is made available to end user. When using this option, ensure AGLS record has information recorded against the AGLS Availability element.
	MD_Metadata.distributionInfo > MD_Distribution >> MD_Medium.name > MD_MediumNameCode Or MD_Medium.mediumNote	↔	Optional	Use this option where AGLS Format element = 'medium'. When mapping from ANZLIC to AGLS, in the first instance, set the scheme to be the URL for the ISO 19115 MD_MediumNameCodeodelist. Alternatively, map to MD_Medium.mediumNote. When using this option, ensure AGLS record has information recorded against the AGLS Availability element. AGLS and ANZLIC may use different references to describe the same medium; e.g. AGLS refers to 'Digital Video Disc' whereas ANZLIC refers to 'DVD'.

AGLS / NZGLS		ANZLIC METADATA PROFILE				
Metadata element and obligation	Path (as represented in the ISO 19115 UML diagrams)	Mapping	ANZLIC obligation	Explanatory notes		
	MD_Metadata.distributionInfo > MD_Distribution.transferOptions > MD_DigitalTransferOptions.transferSize	↔	Optional	Use when AGLS Format element = 'extent'. When using this option, ensure AGLS record has informaiton recorded against the AGLS Availability element.		
Mandate AGLS: Optional NZGLS: Recommended	Other citation details					
	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.otherCitationDetails	→	Optional	For AGLS, the value for Mandate might be set as a default within the agency/group.		
Relation AGLS: Optional NZGLS: Optional	Supplemental Information					
	MD_Metadata.identificati onInfo > MD_DataIdentification.a ggregationInfo > MD_AggregationInforma tion.aggregateDataSetId entifier > MD_Identifier.code [where associationType = 'crossReference' or ' largerWorkCitation']	↔ see explanatory notes └ see explanatory notes	Optional	This mapping is used where AGLS Relation qualifier = ' isPartOf' or 'hasPart'. Mapping options between AGLS and ANZLIC:		
				ANZLI C associ ationT ype:	Map ping	AGL S quali fier:
				crossR eferen ce'	↔	refer ence s'
				larger Citatio nWork'	↔	isPar tOf'
				crossR eferen ce'	└	hasP art'
	MD_Metadata.identificati onInfo > MD_DataIdentification.a ggregationInfo > MD_AggregateInformati on.aggregateDataSetNa me > CI_Citation.title and .date	↔	Optional	This mapping is satisfactory where AGLS Relation qualiaifer = ' references', and for other AGLS Relation qualifiers to a lesser extent.		

AGLS / NZGLS	ANZLIC METADATA PROFILE			
Metadata element and obligation	Path (as represented in the ISO 19115 UML diagrams)	Mapping	ANZLIC obligation	Explanatory notes
	MD_Metadata.identificationInfo > MD_DataIdentification.supplementalInformation	→	Optional	Use this option where AGLS Relation qualifier is not 'references', 'isPartOf' or 'hasPart'.
	MD_Metadata.identificationInfo > MD_DataIdentification.citation > CI_Citation.series > CI_Series.name	└	Optional	Use this option where AGLS Relation qualifier = 'isPartOf'.
Rights AGLS: Optional NZGLS: Optional, not used for Agency	Constraints			
	MD_Metadata.identificationInfo > MD_DataIdentification.resourceConstraints > MD_Constraints.useLimitation	└	Optional	
	MD_Metadata.identificationInfo > MD_DataIdentification.resourceConstraints > MD_LegalConstraints.accessConstraints > MD_RestrictionCode	└	Optional	
	MD_Metadata.identificationInfo > MD_DataIdentification.resourceConstraints > MD_LegalConstraints.useConstraints > MD_RestrictionCode	└	Optional	
	MD_Metadata.identificationInfo > MD_DataIdentification.resourceConstraints > MD_LegalConstraints.otherConstraints	└	Optional	
	MD_Metadata.identificationInfo > MD_DataIdentification.resourceConstraints > MD_SecurityConstraints.handlingDescription	└	Optional	
	MD_Metadata.identificationInfo > MD_DataIdentification.resourceConstraints > MD_SecurityConstraints.classification > MD_ClassificationCode	└	Optional	
	MD_Metadata.identificationInfo > MD_DataIdentification.resourceConstraints > MD_SecurityConstraints.userNote	└	Optional	
	MD_Metadata.identificationInfo > MD_DataIdentification.resourceConstraints > MD_SecurityConstraints.classificationSystem	└	Optional	
Source AGLS: Optional NZGLS: Optional	Source			
	MD_Metadata.dataQualityInfo > DQ_DataQuality.lineage > LI_Lineage.source > LI_Source.description	↔	Optional	
	MD_Metadata.dataQualityInfo > DQ_DataQuality.lineage > LI_Lineage.source > LI_Source.sourceCitation > CI_Citation	↔	Optional	
	MD_Metadata.identificationInfo > MD_DataIdentification.aggregationInfo > MD_AggregateInformation.aggregateDataSetIdentifier > MD_Identifier.code	└	Optional	

AGLS / NZGLS	ANZLIC METADATA PROFILE			
Metadata element and obligation	Path (as represented in the ISO 19115 UML diagrams)	Mapping	ANZLIC obligation	Explanatory notes
	MD_Metadata.identificationInfo > MD_DataIdentification.aggregationInfo > MD_AggregateInformation.aggregateDataSetName > CI_Citation.title [where initiativeType = 'source']	⌞	Optional	

References used to assist preparation of the mapping between AGLS/NZGLS and ANZLIC:

- [1] ANZLIC Metadata Profile (v1.0, December 2006)
- [2] AS/NZS ISO 19115:2005, Geographic information — Metadata
- [3] ISO 19115:2003/Cor.1:2006, Geographic information — Metadata — Technical Corrigendum 1
- [4] AS 5044:2002, AGLS Metadata element set
- [5] I.S. CWA 14857:2003, Mapping between Dublin Core and ISO 19115, “Geographic information — Metadata”
- [6] NZGLS Metadata Element Set

I.S. Irish Standard

CEN European Committee for Standardization

CWA CEN Workshop Agreement

11.2 Mapping ANZLIC Metadata Guidelines (Version 2, 2001) to ANZLIC Metadata Profile

ANZLIC provides an XSL list that can be used to map the ANZLIC Metadata Guidelines (Version 2, 2001) XML (anzmeta_1.3 XML) to the ANZLIC Metadata Profile XML. This XSL should be used in conjunction with an XSLT tool to transform old ANZLIC XML into the new format. The ANZLIC XSL is available from the ANZLIC web site at <http://www.anzlic.org.au>.

The table below summarises the above mapping. Note that the XSL contains additional information that is not shown in this table which should be considered when developing a customised translation process.

Table B2. Mapping of ANZLIC Core Elements Version 2 (2001) (ANZMETA DTD 1.3) to the ANZLIC Metadata Profile

	Former ANZLIC content ANZLIC Core Elements Version 2 (2001) (ANZMETA DTD 1.3)		Revised ANZLIC content ANZLIC Metadata Profile
	ANZLIC Category	ANZLIC Element Name	ANZLIC Profile modifications from ANZLIC proposed modifications from CSIRO
1.	Dataset	ANZLIC Identifier (uniqueid)	MD_Metadata. identificationInfo:MD_DataIdentification. citation:CI_Citation. identifier:MD_Identifier. code: CharacterString
2.		Title (title)	MD_Metadata. identificationInfo:MD_DataIdentification. citation:CI_Citation. title: CharacterString
3.	Custodian	Custodian (custod)	MD_Metadata. identificationInfo:MD_DataIdentification. citation:CI_Citation. citedResponsibleParty:CI_ResponsibleParty. organisationName: CharacterString
4.			MD_Metadata. identificationInfo:MD_DataIdentification. citation:CI_Citation. citedResponsibleParty:CI_ResponsibleParty. role:CI_RoleCode = custodian
5.		Jurisdiction (juridic)	None
6.	Description	Abstract (abstract)	MD_Metadata. identificationInfo:MD_DataIdentification. abstract: CharacterString

	Former ANZLIC content ANZLIC Core Elements Version 2 (2001) (ANZMETA DTD 1.3)		Revised ANZLIC content ANZLIC Metadata Profile
7.		Search Word (theme)	MD_Metadata. identificationInfo:MD_DataIdentification. descriptiveKeywords:MD_Keywords. keyword: CharacterString Note: ANZLIC search word qualifier is discarded
8.			MD_Metadata. identificationInfo:MD_DataIdentification. descriptiveKeywords:MD_Keywords. type:MD_KeywordTypeCode = theme
9.			MD_Metadata. identificationInfo:MD_DataIdentification. descriptiveKeywords:MD_Keywords. thesaurusName:CI_Citation. title:CharacterString = "ANZLIC Search Words" MD_Metadata. identificationInfo:MD_DataIdentification. descriptiveKeywords:MD_Keywords. thesaurusName:CI_Citation. citedResponsibleParty:CI_ResponsibleParty. organisationName: CharacterString=" ANZLIC - the Spatial Information Council" MD_Metadata. identificationInfo:MD_DataIdentification. descriptiveKeywords:MD_Keywords. thesaurusName:CI_Citation. citedResponsibleParty:CI_ResponsibleParty. role:CI_RoleCode = custodian MD_Metadata. identificationInfo:MD_DataIdentification. descriptiveKeywords:MD_Keywords. thesaurusName:CI_Citation. date:CI_Date. date:Date = "2001" MD_Metadata. identificationInfo:MD_DataIdentification. descriptiveKeywords:MD_Keywords. thesaurusName:CI_Citation. edition:CharacterString = "Version 2" MD_Metadata. identificationInfo:MD_DataIdentification. descriptiveKeywords:MD_Keywords. thesaurusName:CI_Citation. editionDate:Date = "2001-02"
10.		Geographic	comprised of the three elements following immediately below:

	Former ANZLIC content ANZLIC Core Elements Version 2 (2001) (ANZMETA DTD 1.3)	Revised ANZLIC content ANZLIC Metadata Profile
		Extent Name
11.		GEN Category
		MD_Metadata. identificationInfo:MD_DataIdentification. extent:EX_Extent. geographicElement: EX_GeographicDescription. geographicIdentifier:MD_Identifier. authority:CI_Citation. series:CI_Series. name: CharacterString
12.		GEN Custodial Jurisdiction
		MD_Metadata. identificationInfo:MD_DataIdentification. extent:EX_Extent. geographicElement::EX_GeographicDescription. geographicIdentifier:MD_Identifier. authority:CI_Citation. citedResponsibleParty:CI_ResponsibleParty. organisationName: CharacterString
13.		GEN Name
		MD_Metadata. identificationInfo:MD_DataIdentification. extent:EX_Extent. geographicElement:EX_GeographicDescription. geographicIdentifier:MD_Identifier. code: CharacterString
14.		Geographic Extent Polygon
		MD_Metadata. identificationInfo:MD_DataIdentification. extent:EX_Extent. geographicElement:EX_BoundingPolygon polygon:gml:Polygon gml:exterior:gml:LinearRing
15.		Geographic Bounding Box
		comprised of following four elements:
16.		North Bounding Latitude
		MD_Metadata. identificationInfo:MD_DataIdentification. geographicBox:EX_GeographicBoundingBox. northBoundLatitude: Decimal (-90,90)
17.		South Bounding Latitude
		MD_Metadata. identificationInfo:MD_DataIdentification. geographicBox:EX_GeographicBoundingBox. southBoundLatitude:Decimal (-90,90)
18.		East Bounding Longitude
		MD_Metadata. identificationInfo:MD_DataIdentification.

	Former ANZLIC content ANZLIC Core Elements Version 2 (2001) (ANZMETA DTD 1.3)		Revised ANZLIC content ANZLIC Metadata Profile
			geographicBox:EX_GeographicBoundingBox. eastBoundLongitude:Decimal (-180,180)
19.		West Bounding Longitude	MD_Metadata. identificationInfo:MD_DataIdentification. geographicBox:EX_GeographicBoundingBox. westBoundLongitude: Decimal (-180,180)
20.	Data Currency	Beginning Date	MD_Metadata. identificationInfo:MD_DataIdentification. extent:EX_Extent. temporalElement:EX_TemporalExtent. extent:TM_Period. beginPosition ISO 8601
21.		Ending Date	MD_Metadata. identificationInfo:MD_DataIdentification. extent:EX_Extent. temporalElement:EX_TemporalExtent. extent:TM_Period. endPosition ISO 8601
22.	Dataset Status	Progress	MD_Metadata. identificationInfo:MD_DataIdentification. status:MD_ProgressCode
23.		Maintenance & Update Frequency	MD_Metadata. identificationInfo:MD_DataIdentification. resourceMaintenance:MD_MaintenanceInformation. maintenanceAndUpdateFrequency:MD_MaintenanceFrequencyCode
24.	Access	Stored Data Format	MD_Metadata. identificationInfo:MD_DataIdentification. resourceFormat:MD_Format. name: CharacterString
25.			MD_Metadata. identificationInfo:MD_DataIdentification. resourceFormat:MD_Format. version: CharacterString
26.		Available Format Type	MD_Metadata. distributionInfo:MD_Distribution. distributionFormat:MD_Format. name: CharacterString
27.			MD_Metadata. distributionInfo:MD_Distribution.

	Former ANZLIC content ANZLIC Core Elements Version 2 (2001) (ANZMETA DTD 1.3)		Revised ANZLIC content ANZLIC Metadata Profile
			distributionFormat:MD_Format. version: CharacterString
28.		Access Constraint	MD_Metadata. identificationInfo:MD_DataIdentification. resourceConstraints:MD_LegalConstraints. otherConstraints:CharacterString
29.	Data Quality	Lineage	MD_Metadata. dataQualityInfo:DQ_DataQuality. lineage:LI_Lineage. statement: CharacterString
30.		Positional Accuracy	MD_Metadata. dataQualityInfo:DQ_DataQuality. report:DQ_AbsoluteExternalPositionalAccuracy. result::DQ_ConformanceResult. explanation:CharacterString MD_Metadata. dataQualityInfo:DQ_DataQuality. report:DQ_AbsoluteExternalPositionalAccuracy. result:DQ_ConformanceResult. specification:CI_Citation MD_Metadata. dataQualityInfo:DQ_DataQuality. report:DQ_AbsoluteExternalPositionalAccuracy. result::DQ_ConformanceResult. pass:Boolean
31.		Attribute Accuracy	MD_Metadata. dataQualityInfo:DQ_DataQuality. report:DQ_NonQuantitativeAttributeAccuracy. result:DQ_ConformanceResult. explanation:CharacterString MD_Metadata. dataQualityInfo:DQ_DataQuality. report:DQ_NonQuantitativeAttributeAccuracy. result:DQ_ConformanceResult. specification:CI_Citation MD_Metadata. dataQualityInfo:DQ_DataQuality. report: DQ_NonQuantitativeAttributeAccuracy.. result::DQ_ConformanceResult. pass:Boolean
32.		Logical Consistency	MD_Metadata. dataQualityInfo:DQ_DataQuality. report:DQ_ConceptualConsistency.

	Former ANZLIC content ANZLIC Core Elements Version 2 (2001) (ANZMETA DTD 1.3)		Revised ANZLIC content ANZLIC Metadata Profile
			<p>result:DQ_ConformanceResult. explanation:CharacterString</p> <p>MD_Metadata. dataQualityInfo:DQ_DataQuality. report: DQ_ConceptualConsistency. result:DQ_ConformanceResult. specification:CI_Citation</p> <p>MD_Metadata. dataQualityInfo:DQ_DataQuality. report: DQ_ConceptualConsistency. result::DQ_ConformanceResult. pass:Boolean</p>
33.		Completeness	<p>MD_Metadata. dataQualityInfo:DQ_DataQuality. report:DQ_CompletenessOmission. result:DQ_ConformanceResult. explanation:CharacterString</p> <p>MD_Metadata. dataQualityInfo:DQ_DataQuality. report: DQ_CompletenessOmission. result:DQ_ConformanceResult. specification:CI_Citation</p> <p>MD_Metadata. dataQualityInfo:DQ_DataQuality. report: DQ_CompletenessOmission. result::DQ_ConformanceResult. pass:Boolean</p>
34.	Contact Information	Contact Organisation	MD_Metadata. identificationInfo:MD_DataIdentification pointOfContact:CI_ResponsibleParty. organisationName: CharacterString
35.		Contact Position	MD_Metadata. identificationInfo:MD_DataIdentification pointOfContact:CI_ResponsibleParty. positionName: CharacterString
36.		Mail Address	MD_Metadata. identificationInfo:MD_DataIdentification pointOfContact:CI_ResponsibleParty. contactInfo:CI_Contact. address:CI_Address. deliveryPoint: CharacterString
37.		Locality	MD_Metadata. identificationInfo:MD_DataIdentification

	Former ANZLIC content ANZLIC Core Elements Version 2 (2001) (ANZMETA DTD 1.3)		Revised ANZLIC content ANZLIC Metadata Profile
			pointOfContact:CI_ResponsibleParty. contactInfo:CI_Contact. address:CI_Address. city: CharacterString
38.		State or Locality 2	MD_Metadata. identificationInfo:MD_DataIdentification pointOfContact:CI_ResponsibleParty. contactInfo:CI_Contact. address:CI_Address. administrativeArea: CharacterString
39.		Country	MD_Metadata.. identificationInfo:MD_DataIdentification pointOfContact:CI_ResponsibleParty. contactInfo:CI_Contact. address:CI_Address. country:ISO 3166-3
40.		Postcode	MD_Metadata. identificationInfo:MD_DataIdentification pointOfContact:CI_ResponsibleParty. contactInfo:CI_Contact. address:CI_Address. postalCode: CharacterString
41.		Telephone	MD_Metadata. identificationInfo:MD_DataIdentification pointOfContact:CI_ResponsibleParty. contactInfo:CI_Contact. phone:CI_Telephone. voice: CharacterString
42.		Facsimile	MD_Metadata. identificationInfo:MD_DataIdentification pointOfContact:CI_ResponsibleParty. contactInfo:CI_Contact. phone:CI_Telephone. facsimile: CharacterString
43.		Electronic Mail Address	MD_Metadata. identificationInfo:MD_DataIdentification pointOfContact:CI_ResponsibleParty. contactInfo:CI_Contact. address:CI_Address. electronicMailAddress: CharacterString
44.	Metadata Date	Metadata Date	MD_Metadata. dateStamp:ISO 8601

	Former ANZLIC content ANZLIC Core Elements Version 2 (2001) (ANZMETA DTD 1.3)		Revised ANZLIC content ANZLIC Metadata Profile
45.	Additional Metadata	Additional Metadata	MD_Metadata. identificationInfo:MD_DataIdentification. supplementalInformation: CharacterString
46.			MD_Metadata.fileIdentifier

12. Annex C : Index of Elements

12.1 Index of Elements by Name

Table C1. Index of elements by name

No.	Name	Element
70	Access Constraints	accessConstraints
380	Address	CI_Address
383	Administrative Area	administrativeArea
66.3	Aggregate Dataset Identifier	aggregateDataSetIdentifier
66.2	Aggregate Dataset Name	aggregateDataSetName
66.1	Aggregate Information	MD_AggregateInformation
35.1	Aggregation Information	<i>Role name:</i> aggregationInfo
399	Application Profile	applicationProfile
324	Application Schema Ascii	schemaAscii
323	Application Schema Constraint Language	constraintLanguage
325	Application Schema Graphics File	graphicsFile
21	Application Schema Information	<i>Role name:</i> applicationSchemaInfo
320	Application Schema Information	MD_ApplicationSchemaInformation
322	Application Schema Language	schemaLanguage
321	Application Schema Name	name
326	Application Schema Software Development File	softwareDevelopmentFile
327	Application Schema Software Development File Format	softwareDevelopmentFileFormat
406	Article Page	page
66.4	Association Type	associationType
240	Attribute Description	attributeDescription
153	Attribute Instance Set	attributeInstances
150	Attribute Set	attributes
159	Axis Dimension Properties	axisDimensionProperties
259	Band	MD_Band
gml2	Beginning Time	beginPosition
264	Bits Per Value	bitsPerValue
341	Bounding Polygon	EX_BoundingPolygon
48	Browse Graphic	MD_BrowseGraphic

No.	Name	Element
50	Browse Graphic File Description	fileDescription
49	Browse Graphic File Name	fileName
51	Browse Graphic File Type	fileType
253	Camera Calibration Information Availability	cameraCalibrationInformationAvailability
238	Catalogue Citation	featureCatalogueCitation
237	Catalogue FeatureTypes	featureTypes
235	Catalogue Language	language
160	Cell Geometry	cellGeometry
166	Center Point	centerPoint
163	Check Point Availability	checkPointAvailability
164	Check Point Description	checkPointDescription
359	Citation	CI_Citation
365	Citation Identifier	identifier
367	Cited Responsible Party	citedResponsibleParty
382	City	city
74	Classification	classification
76	Classification System	classificationSystem
248	Cloud Cover Percentage	cloudCoverPercentage
371	Collective Title	collectiveTitle
234	Compliance Code	complianceCode
250	Compression Generation Quantity	compressionGenerationQuantity
131	Conformance Explanation	explanation
132	Conformance Pass	pass
129	Conformance Result	DQ_ConformanceResult
130	Conformance Specification	specification
67	Constraints	MD_Constraints
387	Contact	CI_Contact
389	Contact Address	address
391	Contact Hours	hoursOfService
392	Contact Instructions	contactInstructions
390	Contact Online Resource	onlineResource
388	Contact Phone	phone
16	Content Information	<i>Role name:</i> contentInfo
232	Content Information	MD_ContentInformation

No.	Name	Element
241	Content Type	contentType
171	Control Point Availability	controlPointAvailability
165	Corner Points	cornerPoints
385	Country	country
239	Coverage Description	MD_CoverageDescription
242	Coverage Dimension	Role name: dimension
40	Data Character Set	characterSet
36	Data Identification	MD_DataIdentification
39	Data Language	language
81	Data Lineage	lineage
78	Data Quality	DQ_DataQuality
117	Data Quality Absolute External Positional Accuracy	DQ_AbsoluteExternalPositionalAccuracy
121	Data Quality Accuracy Of A Time Measurement	DQ_AccuracyOfATimeMeasurement
108	Data Quality Completeness	DQ_Completeness
109	Data Quality Completeness Commission	DQ_CompletenessCommission
110	Data Quality Completeness Omission	DQCompOm
113	Data Quality Domain Consistency	DQ_DomainConsistency
99	Data Quality Element	DQ_Element
114	Data Quality Format Consistency	DQ_FormatConsistency
118	Data Quality Gridded Data Positional Accuracy	DQ_GriddedDataPositionalAccuracy
18	Data Quality Information	<i>Role name:</i> dataQualityInfo
126	Data Quality Non Quantitative Attribute Accuracy	DQ_NonQuantitativeAttributeAccuracy
116	Data Quality Positional Accuracy	DQ_PositionalAccuracy
127	Data Quality Quantitative Attribute Accuracy	DQ_QuantitativeAttributeAccuracy
133	Data Quality Quantitative Result	DQ_QuantitativeResult
119	Data Quality RelativeInternal Positional Accuracy	DQ_RelativeInternalPositionalAccuracy
80	Data Quality Report	report
128	Data Quality Result	DQ_Result
79	Data Quality Scope	scope
138	Data Quality Scope	DQ_Scope
120	Data Quality Temporal Accuracy	DQ_TemporalAccuracy
122	Data Quality Temporal Consistency	DQ_TemporalConsistency
123	Data Quality Temporal Validity	DQ_TemporalValidity
124	Data Quality Thematic Accuracy	DQ_ThematicAccuracy

No.	Name	Element
125	Data Quality Thematic Classification Correctness	DQ_ThematicClassificationCorrectness
115	Data Quality Topological Consistency	DQ_TopologicalConsistency
38	Data Scale	spatialResolution
85	Data Source	<i>Role name:</i> source
369	Dataset Series	series
403	Dataset Series	CI_Series
154	Dataset Set	dataset
11.1	Dataset URI	dataSetURI
89	Date & Time	dateTime
106	Date and Time	measDateTm
144	Date of Next Update	dateOfNextUpdate
393	Date Reference	CI_Date
381	Delivery Point	deliveryPoint
87	Description	description
93	Description	description
33	Descriptive Keywords	<i>Role name:</i> descriptiveKeywords
274	Digital Transfer Options	MD_DigitalTransferOptions
179	Dimension	MD_Dimension
258	Dimension Descriptor	descriptor
180	Dimension Name	dimensionName
181	Dimension Size	dimensionSize
270	Distribution	MD_Distribution
271	Distribution Format	<i>Role name:</i> distributionFormat
17	Distribution Information	<i>Role name:</i> distributionInfo
281	Distribution Order Process	<i>Role name:</i> distributionOrderProcess
273	Distribution Transfer Options	<i>Role name:</i> transferOptions
272	Distributor	distributor
279	Distributor	MD_Distributor
280	Distributor Contact	distributorContact
282	Distributor Format	<i>Role name:</i> distributorFormat
283	Distributor Transfer	<i>Role name:</i> distributorTransferOptions
197	Domain of Validity	domainOfValidity
112	DQ_ConceptualConsistency	DQ_ConceptualConsistency
111	DQ_LogicalConsistency	DQ_LogicalConsistency

No.	Name	Element
345	East Bounding Longitude	eastBoundLongitude
313	Element Data Type	dataType
386	Email Address	electronicMailAddress
gml3	Ending Time	endPosition
44	Environment Description	environmentDescription
60	Equivalent Scale	equivalentScale
136	Error Statistic	errorStatistic
104	Evaluation Method Description	evalMethDesc
103	Evaluation Method Type	evalMethType
105	Evaluation Procedure	evalProc
309	Extended Domain Code	domainCode
312	Extended Element Condition	condition
310	Extended Element Definition	definition
315	Extended Element Domain Value	domainValue
305	Extended Element Information	<i>Role name:</i> extendedElementInformation
306	Extended Element Information	MD_ExtendedElementInformation
314	Extended Element Maximum Occurrence	maximumOccurence
307	Extended Element Name	name
311	Extended Element Obligation	obligation
316	Extended Element Parent Entity	parentEntity
318	Extended Element Rationale	rationale
317	Extended Element Rule	rule
319	Extended Element Source	source
308	Extended Short Name	shortName
304	Extension Online Resource	<i>Role name:</i> extensionOnLineResource
45	Extent	extent
334	Extent	EX_Extent
335	Extent Description	description
351	Extent Temporal	extent
340	Extent Type Code	extentTypeCode
409	Fax Number	facsimile
233	Feature Catalogue Description	MD_FeatureCatalogueDescription
152	Feature Instance Set	featureInstances
151	Feature Set	features

No.	Name	Element
289	File Decompression Technique	fileDecompressionTechnique
254	Film Distortion Information Availability	filmDistortionInformationAvailability
284	Format	MD_Format
287	Format Amendment Number	amendmentNumber
290	Format Distributor	Role name: formatDistributor
285	Format Name	name
288	Format Specification	specification
286	Format Version	version
343	Geographic Bounding Box	EX_GeographicBoundingBox
348	Geographic Description	EX_GeographicDescription
336	Geographic Extent	<i>Role name:</i> geographicElement
339	Geographic Extent	EX_GeographicExtent
349	Geographic Identifier	geographicIdentifier
185	Geometric Object Count	geometricObjectCount
184	Geometric Object Type	geometricObjectType
178	Geometric Objects	geometricObjects
183	Geometric Objects	MD_GeometricObjects
162	Georectified	MD_Georectified
170	Georeferenceable	MD_Georeferenceable
174	Georeferenced Parameters	georeferencedParameters
31	Graphic Overview	<i>Role name:</i> graphicOverview
157	Grid Spatial Representation	MD_GridSpatialRepresentation
77	Handling Description	handlingDescription
23	Identification	MD_Identification
25	Identification Abstract	abstract
24	Identification Citation	citation
27	Identification Credit	credit
15	Identification Information	<i>Role name:</i> identificationInfo
29	Identification Point of Contact	pointOfContact
26	Identification Purpose	purpose
34	Identification Specific Usage	<i>Role name:</i> resourceSpecificUsage
28	Identification Status	status
206	Identifier Authority	authority
207	Identifier Code	code

No.	Name	Element
208.2	Identifier Version	version
245	Illumination Azimuth Angle	illuminationAzimuthAngle
244	Illumination Elevation Angle	illuminationElevationAngle
243	Image Description	MD_ImageDescription
247	Image Quality Code	imageQualityCode
246	Imaging Condition	imagingCondition
236	Included with Dataset	includedWithDataset
66.5	Initiative Type	initiativeType
42	<i>Intentionally left blank</i>	
43	<i>Intentionally left blank</i>	
58	<i>Intentionally left blank</i>	
188	<i>Intentionally left blank</i>	
189	<i>Intentionally left blank</i>	
190	<i>Intentionally left blank</i>	
191	<i>Intentionally left blank</i>	
192	<i>Intentionally left blank</i>	
193	<i>Intentionally left blank</i>	
194	<i>Intentionally left blank</i>	
198	<i>Intentionally left blank</i>	
199	<i>Intentionally left blank</i>	
200	<i>Intentionally left blank</i>	
201	<i>Intentionally left blank</i>	
202	<i>Intentionally left blank</i>	
203	<i>Intentionally left blank</i>	
204	<i>Intentionally left blank</i>	
209	<i>Intentionally left blank</i>	
210	<i>Intentionally left blank</i>	
211	<i>Intentionally left blank</i>	
212	<i>Intentionally left blank</i>	
213	<i>Intentionally left blank</i>	
214	<i>Intentionally left blank</i>	
215	<i>Intentionally left blank</i>	
216	<i>Intentionally left blank</i>	
217	<i>Intentionally left blank</i>	

No.	Name	Element
218	<i>Intentionally left blank</i>	
219	<i>Intentionally left blank</i>	
220	<i>Intentionally left blank</i>	
221	<i>Intentionally left blank</i>	
222	<i>Intentionally left blank</i>	
223	<i>Intentionally left blank</i>	
224	<i>Intentionally left blank</i>	
225	<i>Intentionally left blank</i>	
226	<i>Intentionally left blank</i>	
227	<i>Intentionally left blank</i>	
228	<i>Intentionally left blank</i>	
229	<i>Intentionally left blank</i>	
230	<i>Intentionally left blank</i>	
231	<i>Intentionally left blank</i>	
328	<i>Intentionally left blank</i>	
329	<i>Intentionally left blank</i>	
330	<i>Intentionally left blank</i>	
331	<i>Intentionally left blank</i>	
332	<i>Intentionally left blank</i>	
333	<i>Intentionally left blank</i>	
357	<i>Intentionally left blank</i>	
366	<i>Intentionally left blank</i>	
372	International Standard Book Number (ISBN)	ISBN
373	International Standard Serial Number (ISSN)	ISSN
405	Issue Identification	issueIdentification
53	Keyword	keyword
54	Keyword Type	type
52	Keywords	MD_Keywords
69	Legal Constraints	MD_LegalConstraints
255	Lens Distortion Information Availability	lensDistortionInformationAvailability
82	Lineage	LI_Lineage
397	Linkage	linkage
11.2	Locate	locate
143	Maintenance and Update Frequency	maintenanceAndUpdateFrequency

No.	Name	Element
148.1	Maintenance Contact	contact
142	Maintenance Information	MD_MaintenanceInformation
148	Maintenance Note	maintenanceNote
146	Maintenance Update Scope	updateScope
260	Maximum Value	maxValue
356	Maximum Vertical Value	maximumValue
102	Measure Description	measDesc
101	Measure Identification	measId
107	Measure Result	result
291	Medium	MD_Medium
293	Medium Density	density
294	Medium Density Units	densityUnits
296	Medium Format	mediumFormat
292	Medium Name	name
297	Medium Note	mediumNote
295	Medium Volume	volumes
1	Metadata	MD_Metadata
4	Metadata Character Set	characterSet
20	Metadata Constraints	<i>Role name:</i> metadataConstraints
9	Metadata Date Stamp	dateStamp
14	Metadata Extension Information	<i>Role name:</i> metadataExtensionInfo
303	Metadata Extension Information	MD_MetadataExtensionInformation
2	Metadata File Identifier	fileIdentifier
6	Metadata Hierarchy Level	hierarchyLevel
7	Metadata Hierarchy Level Name	hierarchyLevelName
205	Metadata Identifier	<<DataType>> MD_Identifier
3	Metadata Language	language
22	Metadata Maintenance	<i>Role name:</i> metadataMaintenance
5	Metadata Parent Identifier	parentIdentifier
8	Metadata Point of Contact	contact
56	Metadata Representative Fraction	MD_RepresentativeFraction
149	Metadata Scope Description	MD_ScopeDescription
10	Metadata Standard Name	metadataStandardName
11	Metadata Standard Version	metadataStandardVersion

No.	Name	Element
176	Metadata Vector Spatial Representation	MD_VectorSpatialRepresentation
261	Minimum Value	minValue
355	Minimum Vertical Value	minimumValue
100	Name Of Measure	nameOfMeasure
347	North Bounding Latitude	northBoundLatitude
158	Number of Dimensions	numberOfDimensions
278	Offline Media	offLine
267	Offset	offset
396	OnLine Resource	CI_OnLineResource
401	Online Resource Description	description
402	Online Resource Function	function
400	Online Resource Name	name
277	Online Source	onLine
302	Order Turnaround	turnaround
301	Ordering Instructions	orderingInstructions
172	Orientation Parameter Availability	orientationParameterAvailability
173	Orientation Parameter Description	orientationParameterDescription
155	Other	other
370	Other Citation Details	otherCitationDetails
72	Other Constraints	otherConstraints
175	Parameter Citation	parameterCitation
263	Peak Response	peakResponse
300	Planned Available Date Time	plannedAvailableDateTime
167	Point in Pixel	pointInPixel
342	Polygon	polygon
269	Portrayal Catalogue Citation	portrayalCatalogueCitation
19	Portrayal Catalogue Information	<i>Role name:</i> portrayalCatalogueInfo
268	Portrayal Catalogue Information	MD_PortrayalCatalogueReference
384	Postcode	postalCode
368	Presentation Form	presentationForm
84	Process Step	<i>Role name:</i> processStep
86	Process Step	LI_ProcessStep
249	Processing Level Code	processingLevelCode
90	Processor	processor

No.	Name	Element
91	Processor Source	Processor Source
92	Processor Source	LI_Source
398	Protocol	protocol
137	Quantitative Value	value
135	Quantitative Value Unit	valueUnit
252	Radiometric Calibration Data Availability	radiometricCalibrationDataAvailability
256	Range Dimension	MD_RangeDimension
88	Rationale	rationale
394	Reference Date	date
395	Reference Date Type	dateType
57	Reference Denominator	denominator
186	Reference System	MD_ReferenceSystem
195	Reference System	RS_ReferenceSystem
208.1	Reference System Code space	codeSpace
187	Reference System Identifier	referenceSystemIdentifier
208	Reference System Identifier	RS_Identifier
13	Reference System Information	<i>Role name:</i> referenceSystemInfo
196	Reference System Name	name
59	Resolution	MD_Resolution
182	Resolution	resolution
361	Resource Alternate Title	alternateTitle
35	Resource Constraints	<i>Role name:</i> resourceConstraints
363	Resource Edition	edition
364	Resource Edition Date	editionDate
299	Resource Fees	fees
32	Resource Format	<i>Role name:</i> resourceFormat
30	Resource Maintenance	<i>Role name:</i> resourceMaintenance
362	Resource Reference Date	date
360	Resource Title	title
374	Responsible Party	CI_ResponsibleParty
378	Responsible Party Contact Information	contactInfo
375	Responsible Party Individual Name	individualName
376	Responsible Party Organisation Name	organisationName
377	Responsible Party Position Name	positionName

No.	Name	Element
379	Role	role
94	Scale Denominator	scaleDenominator
61	Scale Distance	distance
266	Scale Factor	scaleFactor
140	Scope Extent	extent
139	Scope Level	level
141	Scope Level Description	levelDescription
73	Security Constraints	MD_SecurityConstraints
257	Sequence Identifier	sequenceIdentifier
404	Series Name	name
47	Service Identification	SV_ServiceIdentification
96	Source Citation	sourceCitation
97	Source Extent	sourceExtent
95	Source Reference System	sourceReferenceSystem
98	Source Step	sourceStep
346	South Bounding Latitude	southBoundLatitude
353	Spatial Extent	<i>Role name:</i> spatialExtent
156	Spatial Representation	MD_SpatialRepresentation
12	Spatial Representation Information	<i>Role name:</i> spatialRepresentationInfo
37	Spatial Representation Type	spatialRepresentationType
352	Spatial Temporal Extent	EX_SpatialTemporalExtent
63	Specific Usage	specificUsage
298	Standard Order Process	MD_StandardOrderProcess
83	Statement	statement
46	Supplemental Information	supplementalInformation
407	Telephone	CI_Telephone
337	Temporal Element	<i>Role name:</i> temporalElement
350	Temporal Extent	EX_TemporalExtent
55	Thesaurus Name	thesaurusName
gml1	Time Period	TimePeriod
265	Tone Gradation	toneGradation
41	Topic Category	topicCategory
177	Topology Level	topologyLevel
276	Transfer Size	transferSize

No.	Name	Element
168	Transformation Dimension Description	transformationDimensionDescription
169	Transformation Dimension Mapping	transformationDimensionMapping
161	Transformation Parameter Availability	transformationParameterAvailability
251	Triangulation Indicator	triangulationIndicator
275	Units Of Distribution	unitsOfDistribution
147	Update Scope Description	updateScopeDescription
62	Usage	MD_Usage
64	Usage Date & Time	usageDateTime
71	Use Constraints	useConstraints
68	Use Limitation	useLimitation
66	User Contact Information	userContactInfo
145	User Defined Maintenance Frequency	userDefinedMaintenanceFrequency
65	User Determined Limitations	userDeterminedLimitations
75	User Note	userNote
134	Value Type	valueType
262	Value Units	units
358	Vertical Coordinate Reference System	<i>Role name:</i> verticalCRS
338	Vertical Extent	<i>Role name:</i> verticalElement
354	Vertical Extent	EX_VerticalExtent
408	Voice Number	voice
344	West Bounding Longitude	westBoundLongitude

12.2 Index of Elements by Number

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No.	Name	Element
1	Metadata	MD_Metadata
2	Metadata File Identifier	fileIdentifier
3	Metadata Language	language
4	Metadata Character Set	characterSet
5	Metadata Parent Identifier	parentIdentifier
6	Metadata Hierarchy Level	hierarchyLevel
7	Metadata Hierarchy Level Name	hierarchyLevelName
8	Metadata Point of Contact	contact
9	Metadata Date Stamp	dateStamp
10	Metadata Standard Name	metadataStandardName
11	Metadata Standard Version	metadataStandardVersion
11.1	Dataset URI	dataSetURI
11.2	Locate	locate
12	Spatial Representation Information	<i>Role name:</i> spatialRepresentationInfo
13	Reference System Information	<i>Role name:</i> referenceSystemInfo
14	Metadata Extension Information	<i>Role name:</i> metadataExtensionInfo
15	Identification Information	<i>Role name:</i> identificationInfo
16	Content Information	<i>Role name:</i> contentInfo
17	Distribution Information	<i>Role name:</i> distributionInfo
18	Data Quality Information	<i>Role name:</i> dataQualityInfo
19	Portrayal Catalogue Information	<i>Role name:</i> portrayalCatalogueInfo
20	Metadata Constraints	<i>Role name:</i> metadataConstraints
21	Application Schema Information	<i>Role name:</i> applicationSchemaInfo
22	Metadata Maintenance	<i>Role name:</i> metadataMaintenance
23	Identification	MD_Identification
24	Identification Citation	citation
25	Identification Abstract	abstract
26	Identification Purpose	purpose
27	Identification Credit	credit
28	Identification Status	status
29	Identification Point of Contact	pointOfContact
30	Resource Maintenance	<i>Role name:</i> resourceMaintenance

No.	Name	Element
31	Graphic Overview	<i>Role name:</i> graphicOverview
32	Resource Format	<i>Role name:</i> resourceFormat
33	Descriptive Keywords	<i>Role name:</i> descriptiveKeywords
34	Identification Specific Usage	<i>Role name:</i> resourceSpecificUsage
35	Resource Constraints	<i>Role name:</i> resourceConstraints
35.1	Aggregation Information	<i>Role name:</i> aggregationInfo
36	Data Identification	MD_DataIdentification
37	Spatial Representation Type	spatialRepresentationType
38	Data Scale	spatialResolution
39	Data Language	language
40	Data Character Set	characterSet
41	Topic Category	topicCategory
42	<i>Intentionally left blank</i>	
43	<i>Intentionally left blank</i>	
44	Environment Description	environmentDescription
45	Extent	extent
46	Supplemental Information	supplementalInformation
47	Service Identification	SV_ServiceIdentification
48	Browse Graphic	MD_BrowseGraphic
49	Browse Graphic File Name	fileName
50	Browse Graphic File Description	fileDescription
51	Browse Graphic File Type	fileType
52	Keywords	MD_Keywords
53	Keyword	keyword
54	Keyword Type	type
55	Thesaurus Name	thesaurusName
56	Metadata Representative Fraction	MD_RepresentativeFraction
57	Reference Denominator	denominator
58	<i>Intentionally left blank</i>	
59	Resolution	MD_Resolution
60	Equivalent Scale	equivalentScale
61	Scale Distance	distance
62	Usage	MD_Usage
63	Specific Usage	specificUsage

No.	Name	Element
64	Usage Date & Time	usageDateTime
65	User Determined Limitations	userDeterminedLimitations
66	User Contact Information	userContactInfo
66.1	Aggregate Information	MD_AggregateInformation
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66.3	Aggregate Dataset Identifier	aggregateDataSetIdentifier
66.4	Association Type	associationType
66.5	Initiative Type	initiativeType
67	Constraints	MD_Constraints
68	Use Limitation	useLimitation
69	Legal Constraints	MD_LegalConstraints
70	Access Constraints	accessConstraints
71	Use Constraints	useConstraints
72	Other Constraints	otherConstraints
73	Security Constraints	MD_SecurityConstraints
74	Classification	classification
75	User Note	userNote
76	Classification System	classificationSystem
77	Handling Description	handlingDescription
78	Data Quality	DQ_DataQuality
79	Data Quality Scope	scope
80	Data Quality Report	report
81	Data Lineage	lineage
82	Lineage	LI_Lineage
83	Statement	statement
84	Process Step	<i>Role name:</i> processStep
85	Data Source	<i>Role name:</i> source
86	Process Step	LI_ProcessStep
87	Description	description
88	Rationale	rationale
89	Date & Time	dateTime
90	Processor	processor
91	Processor Source	Processor Source
92	Processor Source	LI_Source

No.	Name	Element
93	Description	description
94	Scale Denominator	scaleDenominator
95	Source Reference System	sourceReferenceSystem
96	Source Citation	sourceCitation
97	Source Extent	sourceExtent
98	Source Step	sourceStep
99	Data Quality Element	DQ_Element
100	Name Of Measure	nameOfMeasure
101	Measure Identification	measId
102	Measure Description	measDesc
103	Evaluation Method Type	evalMethType
104	Evaluation Method Description	evalMethDesc
105	Evaluation Procedure	evalProc
106	Date and Time	measDateTm
107	Measure Result	result
108	Data Quality Completeness	DQ_Completeness
109	Data Quality Completeness Commission	DQ_CompletenessCommission
110	Data Quality Completeness Omission	DQCompOm
111	DQ_LogicalConsistency	DQ_LogicalConsistency
112	DQ_ConceptualConsistency	DQ_ConceptualConsistency
113	Data Quality Domain Consistency	DQ_DomainConsistency
114	Data Quality Format Consistency	DQ_FormatConsistency
115	Data Quality Topological Consistency	DQ_TopologicalConsistency
116	Data Quality Positional Accuracy	DQ_PositionalAccuracy
117	Data Quality Absolute External Positional Accuracy	DQ_AbsoluteExternalPositionalAccuracy
118	Data Quality Gridded Data Positional Accuracy	DQ_GriddedDataPositionalAccuracy
119	Data Quality RelativeInternal Positional Accuracy	DQ_RelativeInternalPositionalAccuracy
120	Data Quality Temporal Accuracy	DQ_TemporalAccuracy
121	Data Quality Accuracy Of A Time Measurement	DQ_AccuracyOfATimeMeasurement
122	Data Quality Temporal Consistency	DQ_TemporalConsistency
123	Data Quality Temporal Validity	DQ_TemporalValidity
124	Data Quality Thematic Accuracy	DQ_ThematicAccuracy
125	Data Quality Thematic Classification Correctness	DQ_ThematicClassificationCorrectness
126	Data Quality Non Quantitative Attribute Accuracy	DQ_NonQuantitativeAttributeAccuracy

No.	Name	Element
127	Data Quality Quantitative Attribute Accuracy	DQ_QuantitativeAttributeAccuracy
128	Data Quality Result	DQ_Result
129	Conformance Result	DQ_ConformanceResult
130	Conformance Specification	specification
131	Conformance Explanation	explanation
132	Conformance Pass	pass
133	Data Quality Quantitative Result	DQ_QuantitativeResult
134	Value Type	valueType
135	Quantitative Value Unit	valueUnit
136	Error Statistic	errorStatistic
137	Quantitative Value	value
138	Data Quality Scope	DQ_Scope
139	Scope Level	level
140	Scope Extent	extent
141	Scope Level Description	levelDescription
142	Maintenance Information	MD_MaintenanceInformation
143	Maintenance and Update Frequency	maintenanceAndUpdateFrequency
144	Date of Next Update	dateOfNextUpdate
145	User Defined Maintenance Frequency	userDefinedMaintenanceFrequency
146	Maintenance Update Scope	updateScope
147	Update Scope Description	updateScopeDescription
148	Maintenance Note	maintenanceNote
148.1	Maintenance Contact	contact
149	Metadata Scope Description	MD_ScopeDescription
150	Attribute Set	attributes
151	Feature Set	features
152	Feature Instance Set	featureInstances
153	Attribute Instance Set	attributeInstances
154	Dataset Set	dataset
155	Other	other
156	Spatial Representation	MD_SpatialRepresentation
157	Grid Spatial Representation	MD_GridSpatialRepresentation
158	Number of Dimensions	numberOfDimensions
159	Axis Dimension Properties	axisDimensionProperties

No.	Name	Element
160	Cell Geometry	cellGeometry
161	Transformation Parameter Availability	transformationParameterAvailability
162	Georectified	MD_Georectified
163	Check Point Availability	checkPointAvailability
164	Check Point Description	checkPointDescription
165	Corner Points	cornerPoints
166	Center Point	centerPoint
167	Point in Pixel	pointInPixel
168	Transformation Dimension Description	transformationDimensionDescription
169	Transformation Dimension Mapping	transformationDimensionMapping
170	Georeferenceable	MD_Georeferenceable
171	Control Point Availability	controlPointAvailability
172	Orientation Parameter Availability	orientationParameterAvailability
173	Orientation Parameter Description	orientationParameterDescription
174	Georeferenced Parameters	georeferencedParameters
175	Parameter Citation	parameterCitation
176	Metadata Vector Spatial Representation	MD_VectorSpatialRepresentation
177	Topology Level	topologyLevel
178	Geometric Objects	geometricObjects
179	Dimension	MD_Dimension
180	Dimension Name	dimensionName
181	Dimension Size	dimensionSize
182	Resolution	resolution
183	Geometric Objects	MD_GeometricObjects
184	Geometric Object Type	geometricObjectType
185	Geometric Object Count	geometricObjectCount
186	Reference System	MD_ReferenceSystem
187	Reference System Identifier	referenceSystemIdentifier
188	<i>Intentionally left blank</i>	
189	<i>Intentionally left blank</i>	
190	<i>Intentionally left blank</i>	
191	<i>Intentionally left blank</i>	
192	<i>Intentionally left blank</i>	
193	<i>Intentionally left blank</i>	

No.	Name	Element
194	<i>Intentionally left blank</i>	
195	Reference System	RS_ReferenceSystem
196	Reference System Name	name
197	Domain of Validity	domainOfValidity
198	<i>Intentionally left blank</i>	
199	<i>Intentionally left blank</i>	
200	<i>Intentionally left blank</i>	
201	<i>Intentionally left blank</i>	
202	<i>Intentionally left blank</i>	
203	<i>Intentionally left blank</i>	
204	<i>Intentionally left blank</i>	
205	Metadata Identifier	<<DataType>> MD_Identifier
206	Identifier Authority	authority
207	Identifier Code	code
208	Reference System Identifier	RS_Identifier
208.1	Reference System Code space	codeSpace
208.2	Identifier Version	version
209	<i>Intentionally left blank</i>	
210	<i>Intentionally left blank</i>	
211	<i>Intentionally left blank</i>	
212	<i>Intentionally left blank</i>	
213	<i>Intentionally left blank</i>	
214	<i>Intentionally left blank</i>	
215	<i>Intentionally left blank</i>	
216	<i>Intentionally left blank</i>	
217	<i>Intentionally left blank</i>	
218	<i>Intentionally left blank</i>	
219	<i>Intentionally left blank</i>	
220	<i>Intentionally left blank</i>	
221	<i>Intentionally left blank</i>	
222	<i>Intentionally left blank</i>	
223	<i>Intentionally left blank</i>	
224	<i>Intentionally left blank</i>	
225	<i>Intentionally left blank</i>	

No.	Name	Element
226	<i>Intentionally left blank</i>	
227	<i>Intentionally left blank</i>	
228	<i>Intentionally left blank</i>	
229	<i>Intentionally left blank</i>	
230	<i>Intentionally left blank</i>	
231	<i>Intentionally left blank</i>	
232	Content Information	MD_ContentInformation
233	Feature Catalogue Description	MD_FeatureCatalogueDescription
234	Compliance Code	complianceCode
235	Catalogue Language	language
236	Included with Dataset	includedWithDataset
237	Catalogue FeatureTypes	featureTypes
238	Catalogue Citation	featureCatalogueCitation
239	Coverage Description	MD_CoverageDescription
240	Attribute Description	attributeDescription
241	Content Type	contentType
242	Coverage Dimension	Role name: dimension
243	Image Description	MD_ImageDescription
244	Illumination Elevation Angle	illuminationElevationAngle
245	Illumination Azimuth Angle	illuminationAzimuthAngle
246	Imaging Condition	imagingCondition
247	Image Quality Code	imageQualityCode
248	Cloud Cover Percentage	cloudCoverPercentage
249	Processing Level Code	processingLevelCode
250	Compression Generation Quantity	compressionGenerationQuantity
251	Triangulation Indicator	triangulationIndicator
252	Radiometric Calibration Data Availability	radiometricCalibrationDataAvailability
253	Camera Calibration Information Availability	cameraCalibrationInformationAvailability
254	Film Distortion Information Availability	filmDistortionInformationAvailability
255	Lens Distortion Information Availability	lensDistortionInformationAvailability
256	Range Dimension	MD_RangeDimension
257	Sequence Identifier	sequenceIdentifier
258	Dimension Descriptor	descriptor
259	Band	MD_Band

No.	Name	Element
260	Maximum Value	maxValue
261	Minimum Value	minValue
262	Value Units	units
263	Peak Response	peakResponse
264	Bits Per Value	bitsPerValue
265	Tone Gradation	toneGradation
266	Scale Factor	scaleFactor
267	Offset	offset
268	Portrayal Catalogue Information	MD_PortrayalCatalogueReference
269	Portrayal Catalogue Citation	portrayalCatalogueCitation
270	Distribution	MD_Distribution
271	Distribution Format	<i>Role name:</i> distributionFormat
272	Distributor	distributor
273	Distribution Transfer Options	<i>Role name:</i> transferOptions
274	Digital Transfer Options	MD_DigitalTransferOptions
275	Units Of Distribution	unitsOfDistribution
276	Transfer Size	transferSize
277	Online Source	onLine
278	Offline Media	offLine
279	Distributor	MD_Distributor
280	Distributor Contact	distributorContact
281	Distribution Order Process	<i>Role name:</i> distributionOrderProcess
282	Distributor Format	<i>Role name:</i> distributorFormat
283	Distributor Transfer	<i>Role name:</i> distributorTransferOptions
284	Format	MD_Format
285	Format Name	name
286	Format Version	version
287	Format Amendment Number	amendmentNumber
288	Format Specification	specification
289	File Decompression Technique	fileDecompressionTechnique
290	Format Distributor	Role name: formatDistributor
291	Medium	MD_Medium
292	Medium Name	name
293	Medium Density	density

No.	Name	Element
294	Medium Density Units	densityUnits
295	Medium Volume	volumes
296	Medium Format	mediumFormat
297	Medium Note	mediumNote
298	Standard Order Process	MD_StandardOrderProcess
299	Resource Fees	fees
300	Planned Available Date Time	plannedAvailableDateTime
301	Ordering Instructions	orderingInstructions
302	Order Turnaround	turnaround
303	Metadata Extension Information	MD_MetadataExtensionInformation
304	Extension Online Resource	<i>Role name:</i> extensionOnLineResource
305	Extended Element Information	<i>Role name:</i> extendedElementInformation
306	Extended Element Information	MD_ExtendedElementInformation
307	Extended Element Name	name
308	Extended Short Name	shortName
309	Extended Domain Code	domainCode
310	Extended Element Definition	definition
311	Extended Element Obligation	obligation
312	Extended Element Condition	condition
313	Element Data Type	dataType
314	Extended Element Maximum Occurrence	maximumOccurence
315	Extended Element Domain Value	domainValue
316	Extended Element Parent Entity	parentEntity
317	Extended Element Rule	rule
318	Extended Element Rationale	rationale
319	Extended Element Source	source
320	Application Schema Information	MD_ApplicationSchemaInformation
321	Application Schema Name	name
322	Application Schema Language	schemaLanguage
323	Application Schema Constraint Language	constraintLanguage
324	Application Schema Ascii	schemaAscii
325	Application Schema Graphics File	graphicsFile
326	Application Schema Software Development File	softwareDevelopmentFile
327	Application Schema Software Development File Format	softwareDevelopmentFileFormat

No.	Name	Element
328	<i>Intentionally left blank</i>	
329	<i>Intentionally left blank</i>	
330	<i>Intentionally left blank</i>	
331	<i>Intentionally left blank</i>	
332	<i>Intentionally left blank</i>	
333	<i>Intentionally left blank</i>	
334	Extent	EX_Extent
335	Extent Description	description
336	Geographic Extent	<i>Role name:</i> geographicElement
337	Temporal Element	<i>Role name:</i> temporalElement
338	Vertical Extent	<i>Role name:</i> verticalElement
339	Geographic Extent	EX_GeographicExtent
340	Extent Type Code	extentTypeCode
341	Bounding Polygon	EX_BoundingPolygon
342	Polygon	polygon
343	Geographic Bounding Box	EX_GeographicBoundingBox
344	West Bounding Longitude	westBoundLongitude
345	East Bounding Longitude	eastBoundLongitude
346	South Bounding Latitude	southBoundLatitude
347	North Bounding Latitude	northBoundLatitude
348	Geographic Description	EX_GeographicDescription
349	Geographic Identifier	geographicIdentifier
350	Temporal Extent	EX_TemporalExtent
351	Extent Temporal	extent
352	Spatial Temporal Extent	EX_SpatialTemporalExtent
353	Spatial Extent	<i>Role name:</i> spatialExtent
354	Vertical Extent	EX_VerticalExtent
355	Minimum Vertical Value	minimumValue
356	Maximum Vertical Value	maximumValue
357	<i>Intentionally left blank</i>	
358	Vertical Coordinate Reference System	<i>Role name:</i> verticalCRS
359	Citation	CI_Citation
360	Resource Title	title
361	Resource Alternate Title	alternateTitle

No.	Name	Element
362	Resource Reference Date	date
363	Resource Edition	edition
364	Resource Edition Date	editionDate
365	Citation Identifier	identifier
366	<i>Intentionally left blank</i>	
367	Cited Responsible Party	citedResponsibleParty
368	Presentation Form	presentationForm
369	Dataset Series	series
370	Other Citation Details	otherCitationDetails
371	Collective Title	collectiveTitle
372	International Standard Book Number (ISBN)	ISBN
373	International Standard Serial Number (ISSN)	ISSN
374	Responsible Party	CI_ResponsibleParty
375	Responsible Party Individual Name	individualName
376	Responsible Party Organisation Name	organisationName
377	Responsible Party Position Name	positionName
378	Responsible Party Contact Information	contactInfo
379	Role	role
380	Address	CI_Address
381	Delivery Point	deliveryPoint
382	City	city
383	Administrative Area	administrativeArea
384	Postcode	postalCode
385	Country	country
386	Email Address	electronicMailAddress
387	Contact	CI_Contact
388	Contact Phone	phone
389	Contact Address	address
390	Contact Online Resource	onlineResource
391	Contact Hours	hoursOfService
392	Contact Instructions	contactInstructions
393	Date Reference	CI_Date
394	Reference Date	date
395	Reference Date Type	dateType

No.	Name	Element
396	OnLine Resource	CI_OnLineResource
397	Linkage	linkage
398	Protocol	protocol
399	Application Profile	applicationProfile
400	Online Resource Name	name
401	Online Resource Description	description
402	Online Resource Function	function
403	Dataset Series	CI_Series
404	Series Name	name
405	Issue Identification	issueIdentification
406	Article Page	page
407	Telephone	CI_Telephone
408	Voice Number	voice
409	Fax Number	facsimile
gml1	Time Period	TimePeriod
gml2	Beginning Time	beginPosition
gml3	Ending Time	endPosition

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