


AUSTRALIAN & NEW ZEALAND METADATA PROFILE OF ISO 19115

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&
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A stylized silhouette of a mountain range in shades of teal, located in the bottom right corner of the slide.

OUTLINE

- ◆ Who is ANZLIC
- ◆ ANZLIC Metadata
 - Australian Spatial Data Directory
- ◆ ANZLIC Version 2
- ◆ ANZLIC Profile Harmonisation Project
 - Profile
 - Guidelines
 - MET
- ◆ When will it happen

A VAST CHALLENGE

The spatial industry Australia has unique challenges because of:



- **SIZE**
at 7.7 million sq kms it is roughly twice the size of the EU
- **FRAGMENTATION**
a federal system with one national, 8 state and numerous local governments – each with different legislation relating to the spatial information
- **GEOGRAPHY**
most people live in coastal cities and fringes with the remainder of the country being lightly settled agricultural land or deserts

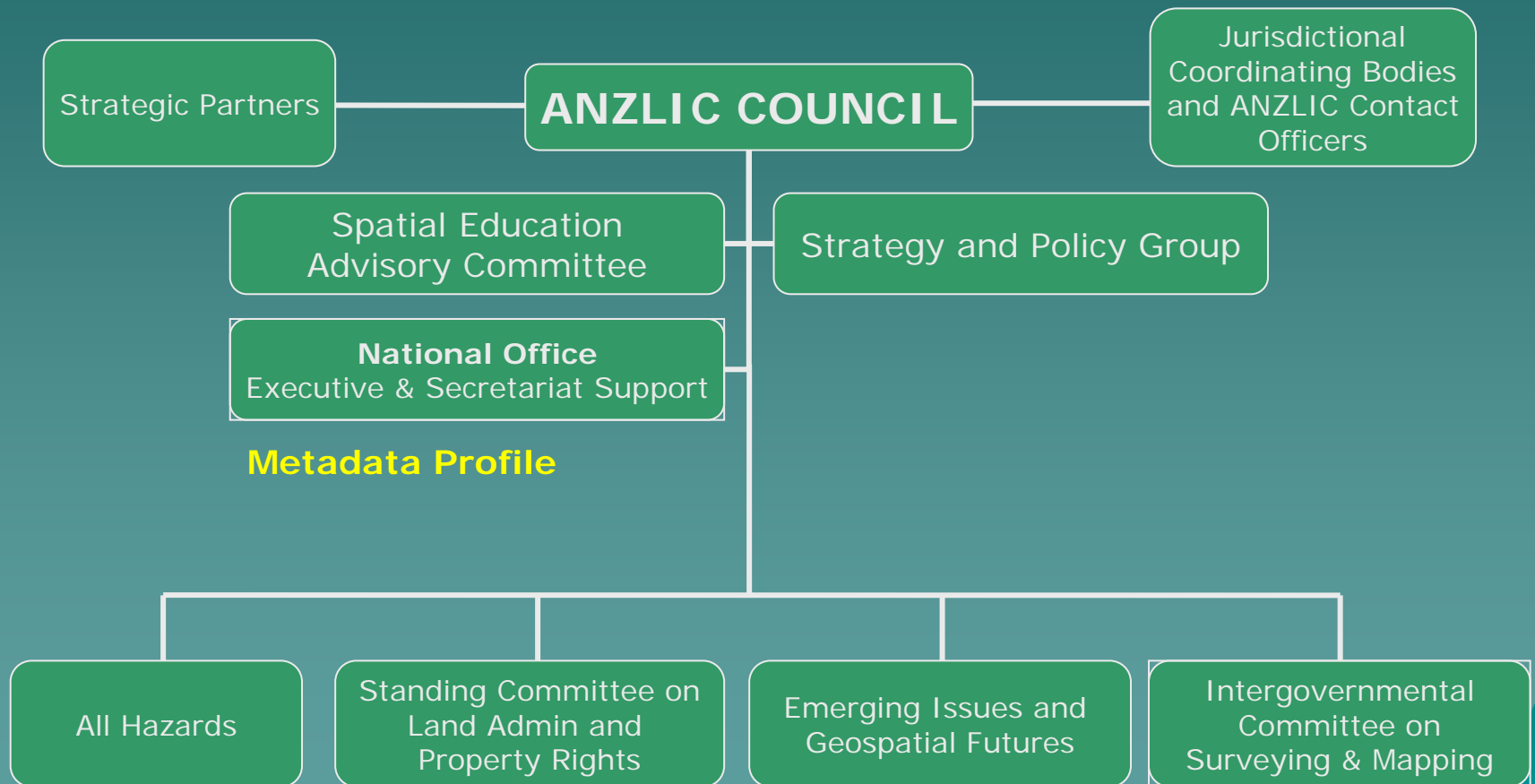


KEY PLAYERS



- ◆ is the peak spatial inter-governmental body
- ◆ its members are heads of State/Territory and federal government agencies
- ◆ it sets national policy
- ◆ strongly advocates the use of standards across the spatial information industry

ANZLIC



Metadata Profile

Harmonised Data Model

How it all started

- ◆ ANZLIC - the Spatial Information Council
- ◆ Australian Spatial Data Infrastructure (ASDI)
- ◆ Australian Spatial Data Directory (ASDD) searches metadata
- ◆ ANZLIC Metadata Guidelines Version 1 (1996) and Version 2 (2001)
 - A great start for Australian metadata
 - Simple structure of about 30 elements
 - Well documented elements
 - Very good examples
 - Refers to a Document Type Definition (DTD) for validation of XML instances

Australian Spatial Data Directory

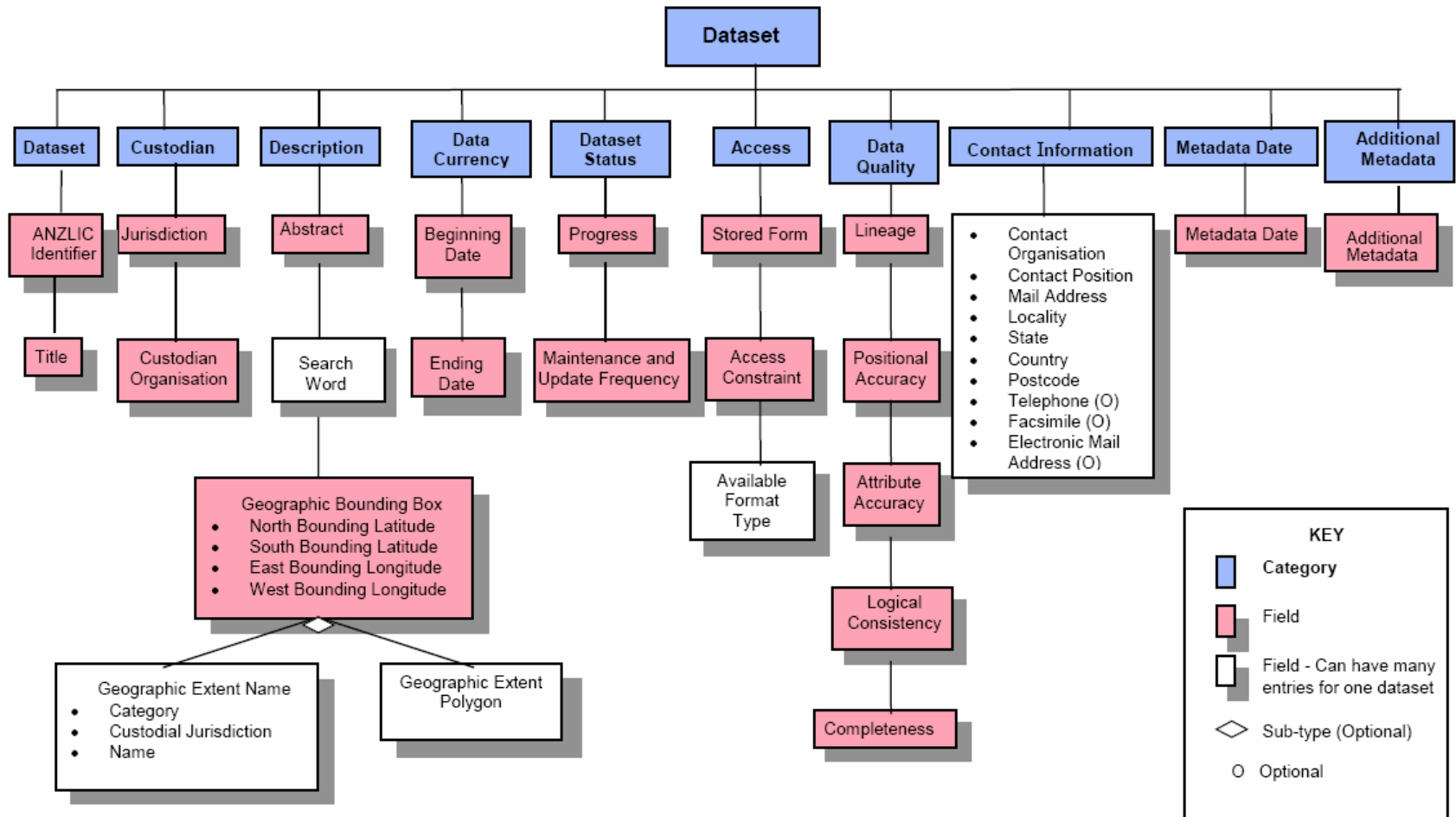
- ◆ Searches through ~39,000 ANZLIC metadata records
- ◆ On 25 ASDD nodes located around Australia
- ◆ Hosted by Geoscience Australia on behalf of ANZLIC
- ◆ Key component of the Australian Spatial Data Infrastructure
- ◆ <http://asdd.ga.gov.au/asdd/>

Translation from ANZLIC Metadata to ISO 19139

- ◆ Major investment in existing ANZLIC metadata
- ◆ Metadata currently in many formats
- ◆ Metadata currently not 100% valid
- ◆ Validation first is essential
- ◆ eXtensible Style Sheets (XSL) to convert from ANZLIC Version 2 to ISO 19139
- ◆ Consider AGLS (Dublin Core) translation?

ANZLIC Version 2 Core Metadata

Figure 1: Graphical Representation of the ANZLIC Core Metadata Elements: Version 2



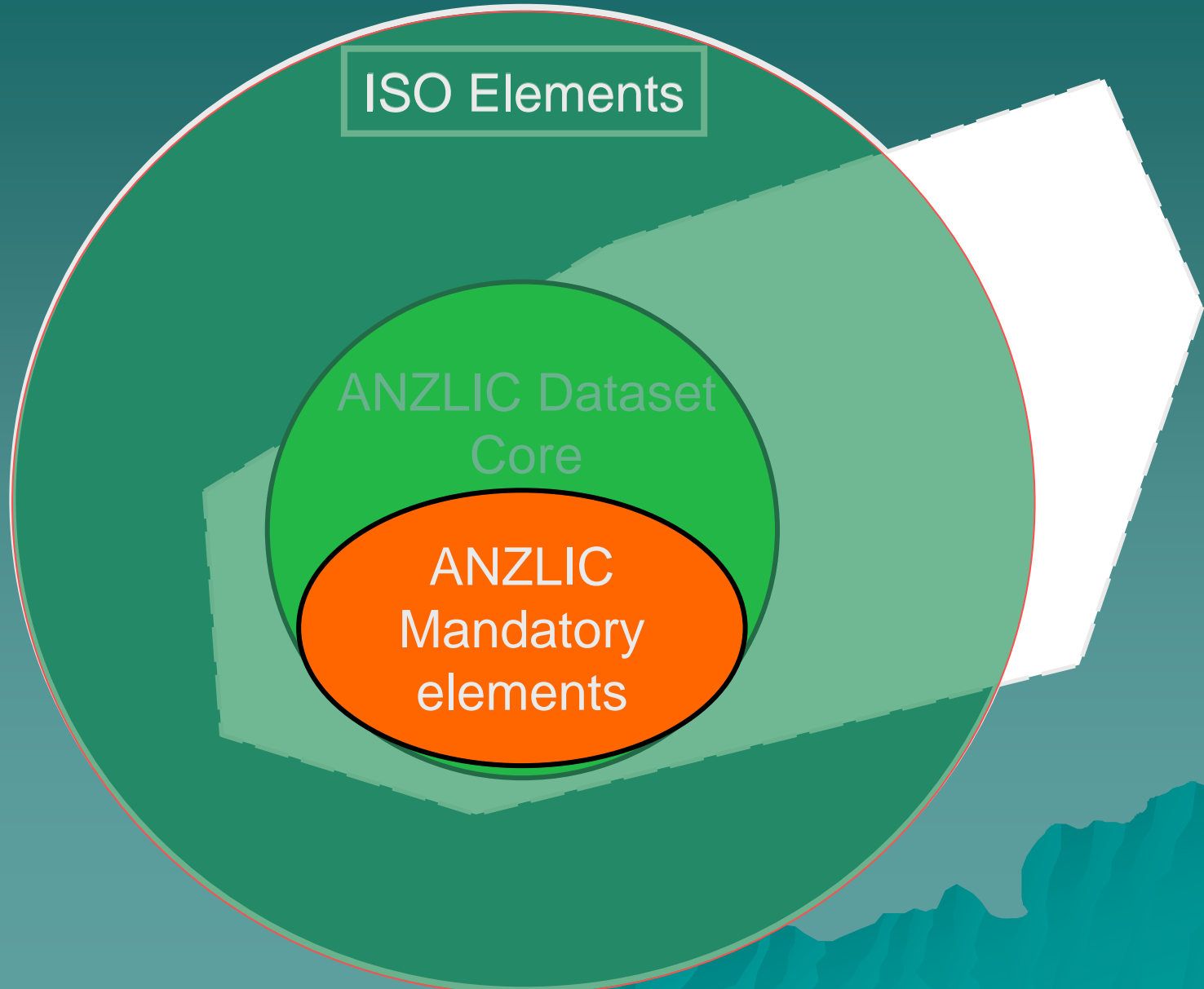
Compare ANZLIC V2 and ISO 19115

- ◆ Only for datasets and series.
- ◆ DTD doesn't check content.
- ◆ Too many mandatory elements.
- ◆ Not enough optional elements.
- ◆ Not accepted internationally.
- ◆ No inheritance
- ◆ Ambiguous "English" model.
- ◆ Doesn't allow OGC and ISO 19100 interoperability.
- ◆ For all data resources.
- ◆ XSDs check content.
- ◆ Minimal mandatory elements.
- ◆ Many optional elements (~400).
- ◆ Accepted internationally.
- ◆ Inheritance
- ◆ Unified Modelling Language
- ◆ Allows OGC and ISO 19100 interoperability.

ANZLIC Profile Harmonisation Project

- ◆ Prompted by Australian Government, WA and New Zealand ISO Profiles
- ◆ Resulted in the ANZLIC Perth and Melbourne metadata meetings (2005-02-11, 2005-02-16)
- ◆ Project Team – Australian and New Zealand Government Agencies, Western Australia and Victoria
- ◆ Will produce:
 - Profile Released Dec 2006
 - User documentation:
 - ◆ UML, element definitions, examples, mapping ANZLIC V2 to Profile, mapping to AGLS and NZGLS.
 - Metadata Entry Tool and XML.
 - Education and outreach.

ANZLIC Metadata Profile



Minimum content

Name	"dataset"	other resource	Name	"dataset"	other resource
Metadata file identifier* (MD_Metadata.fileIdentifier)	M	M	Dataset reference date (MD_Metadata > MD_DataIdentification.citation > CI_Citation.date > CI_Date.date)	M	M
Metadata language (MD_Metadata.language)	C Note 1	C Note 1	Dataset reference dateType (MD_Metadata > MD_DataIdentification.citation > CI_Citation.date > CI_Date.dateType > CI_DateTypeCode)	M	M
Metadata character set (MD_Metadata.characterSet)	C Note 2	C Note 2	Abstract describing the Dataset (MD_Metadata > MD_DataIdentification.abstract)	M	M
Metadata file parent identifier (MD_Metadata.parentIdentifier)	C Note 3	C Note 3	Dataset language (MD_Metadata > MD_DataIdentification.language)	M	M
Metadata hierarchy level (MD_Metadata.hierarchyLevel)	O	M	Dataset character set (MD_Metadata > MD_DataIdentification.characterSet)	C Note 7	C Note 7
Metadata hierarchy level name (MD_Metadata.hierarchyLevelName)	O	M	Topic category (MD_Metadata > MD_DataIdentification.topicCategory)	M	C Note 8
Metadata contact individual name (MD_Metadata.contact > CI_ResponsibleParty.individualName)	C Note 4	C Note 4	Geographic location of the data(set) (by four coordinates) (MD_Metadata > MD_DataIdentification.extent > EX_Extent > EX_GeographicExtent > EX_GeographicBoundingBox)	C Note 9	O
Metadata contact organisation (MD_Metadata.contact > CI_ResponsibleParty.organisationName)	C Note 5	C Note 5	West longitude (MD_Metadata > MD_DataIdentification.extent > EX_Extent > EX_GeographicExtent > EX_GeographicBoundingBox.westBoundLongitude)	M	O
Metadata contact position (MD_Metadata.contact > CI_ResponsibleParty.positionName)	C Note 6	C Note 6	East longitude (MD_Metadata > MD_DataIdentification.extent > EX_Extent > EX_GeographicExtent > EX_GeographicBoundingBox.eastBoundLongitude)	M	O
Metadata contact role (MD_Metadata.contact > CI_ResponsibleParty.Role > CI_RoleCode)	M	M	South latitude (MD_Metadata > MD_DataIdentification.extent > EX_Extent > EX_GeographicExtent > EX_GeographicBoundingBox.southBoundLatitude)	M	O
Metadata date stamp (MD_Metadata.dateStamp)	M	M	North latitude (MD_Metadata > MD_DataIdentification.extent > EX_Extent > EX_GeographicExtent > EX_GeographicBoundingBox.northBoundLatitude)	M	O
Dataset title (MD_Metadata > MD_DataIdentification.citation > CI_Citation.title)	M	M	Dataset reference date (MD_Metadata > MD_DataIdentification.citation > CI_Citation.date > CI_Date.date)	M	M

Note 1: language: documented if not defined by the encoding standard.

Note 2: characterSet: documented if ISO 10646-1 not used and not defined by the encoding standard.

Note 3: parentIdentifier: documented if the hierarchy of a higher level exists.

Note 4: individualName: documented if "organisationName" or "positionName" not documented.

Note 5: organisationName: documented if "individualName" or "positionName" not documented.

Note 6: positionName: documented if "individualName" or "organisationName" not documented.

Note 7: characterSet: documented if ISO 10646-1 is not used.

Note 9: For a spatial dataset, include either the bounding box (extents) or the geographic description.

Core for geographic "dataset"

Name	Obligation	Name	Obligation
Metadata file identifier (MD_Metadata.fileIdentifier)	M	Spatial representation type (MD_Metadata > MD_DataIdentification.spatialRepresentationType)	O
Metadata language (MD_Metadata.language)	C <small>Note 1</small>	Spatial resolution of the dataset (MD_Metadata > MD_DataIdentification.spatialResolution > MD_Resolution.distance)	O <small>Note 4</small>
Metadata character set (MD_Metadata.characterSet)	C <small>Note 2</small>	Dataset language (MD_Metadata > MD_DataIdentification.language)	M
Metadata file parent identifier (MD_Metadata.parentIdentifier)	C <small>Note 3</small>	Dataset character set (MD_Metadata > MD_DataIdentification.characterSet)	C <small>Note 5</small>
Metadata point of contact (MD_Metadata.contact > CI_ResponsibleParty)	M	Dataset topic category (MD_Metadata > MD_DataIdentification.topicCategory)	M
Metadata date stamp (MD_Metadata.dateStamp)	M	Geographic location of the data(set) (by four coordinates) (MD_Metadata > MD_DataIdentification.extent > EX_Extent > EX_GeographicExtent > EX_GeographicBoundingBox)	C <small>Note 6</small>
Metadata standard name (MD_Metadata.metadataStandardName)	O	Temporal extent information for the data(set) (MD_Metadata > MD_DataIdentification.extent > EX_Extent > EX_TemporalExtent.extent)	O
Metadata standard version (MD_Metadata.metadataStandardVersion)	O	Vertical extent information for the data(set) (MD_Metadata > MD_DataIdentification.extent > EX_Extent > EX_VerticalExtent...)	O
Dataset title (MD_Metadata > MD_DataIdentification.citation > CI_Citation.title)	M	Lineage (MD_Metadata > DQ_DataQuality.lineage > LI_Lineage)	O
Dataset reference date (MD_Metadata > MD_DataIdentification.citation > CI_Citation.date)	M	Reference system (MD_Metadata > MD_ReferenceSystem.referenceSystemIdentifier > RS_Identifier.code and codeSpace)	O
Abstract describing the data (MD_Metadata > MD_DataIdentification.abstract)	M	Distribution Format (MD_Metadata > MD_Distribution.//> MD_Format.name and MD_Format.version)	O
Dataset responsible party (MD_Metadata > MD_DataIdentification.pointOfContact > CI_ResponsibleParty)	O	On-line resource (MD_Metadata > MD_Distribution.//> MD_DigitalTransferOption.onLine > CI_OnlineResource)	O

Note 1: language: documented if not defined by the encoding standard.

Note 2: characterSet: documented if ISO 10646-1 not used and not defined by the encoding standard.

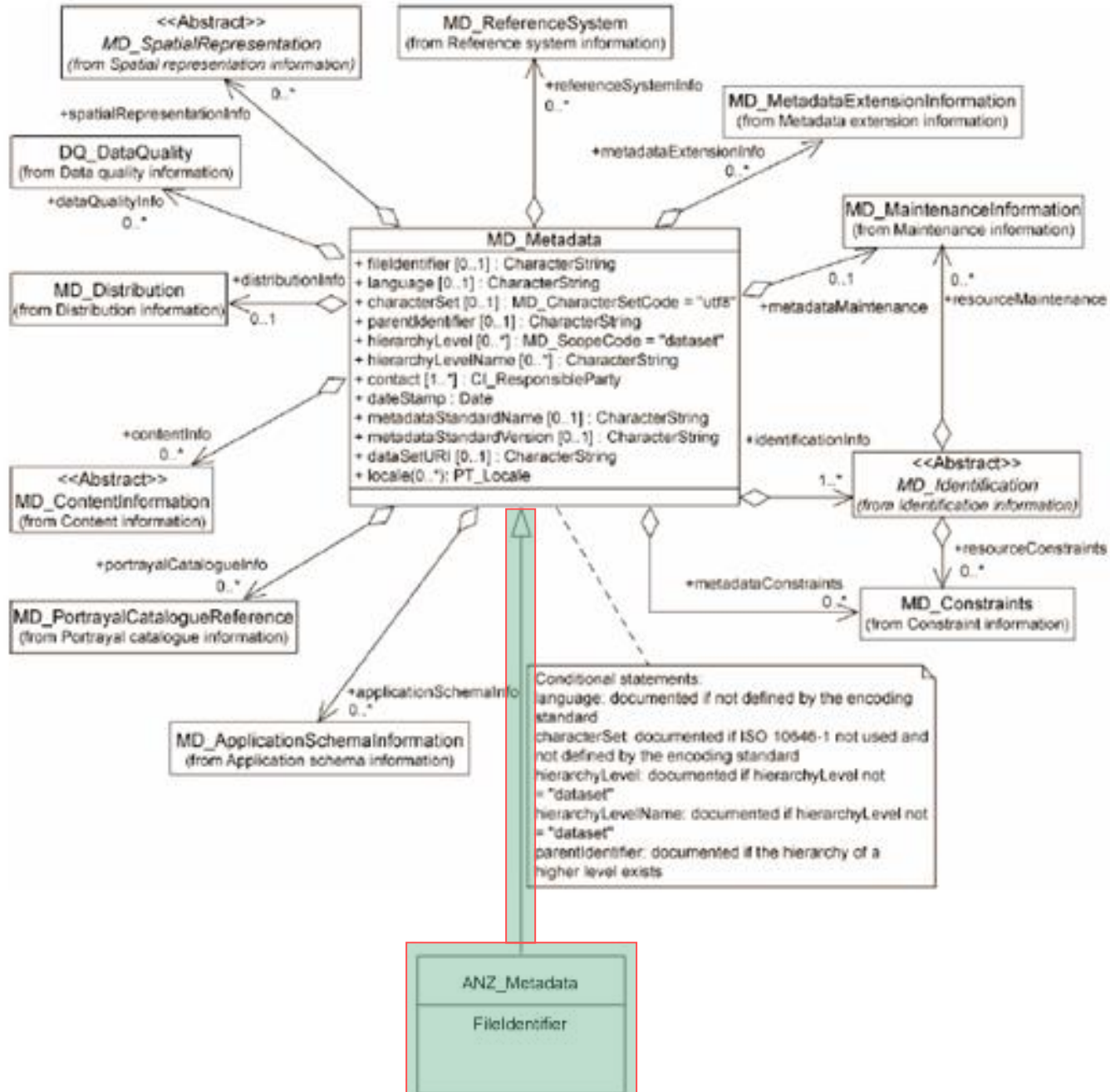
Note 3: Documented if the hierarchy level of a higher level exists. For example if the spatial dataset is part of a series.

Note 4: Distance is preferred over equivalentScale because scale is usually irrelevant when presented at different sizes on the screen.

Note 5: characterSet: documented if ISO 10646-1 is not used.

Note 6: Include either the bounding box (extents) or the geographic description.

ANZLIC Metadata Profile UML



XML Implementation

- ◆ ANZLIC XML will include:
 - ISO 19139 XSDs.
 - Schematron to implement the ISO 19115 conditional statements,
 - XML instance level dictionaries to implement the ISO 19115 code lists,
 - Schematron to implement ANZLIC Metadata Profile,
 - XML instance level dictionaries for the ANZLIC Search words.
 - GML XML document instances for each of the ANZLIC Geographic Extent Name category lists.
 - XSL to translate ANZLIC V2 XML to Profile XML.

Metadata Entry Tool

- ◆ GeoNetwork: Open Source, CSW, ISO 19115, ISO 19139, UN.
- ◆ BlueNet: build on GeoNetwork, allow different profiles, limited by time.
- ◆ ANZLIC: build on BlueNet, gap analysis...
- ◆ Continue investigation options
 - use GeoNetwork

When will it happen?

- ◆ Draft profile was made available for comment by jurisdictions (2006-10)
- ◆ Profile endorsed by ANZLIC (2006-12)
- ◆ User documentation (2006-12/2007-07)
- ◆ MET development (now - 2007?)
- ◆ Education and outreach (2006-11/2007-12)

Questions

Acknowledgment

- ◆ John Hockaday (Geoscience Australia)
- ◆ ANZLIC
- ◆ Intergovernmental Committee on Survey and Mapping
 - Harmonisation Project Team