ANZGeoDCAT

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The purpose of this page is to describe the motivations and requirements for ANZGeoDCAT and this page is being written before ANZGeoDCAT is created to ensure it best caters for a wide range of agreed to requirements.

NOTE	If viewing this within the ANZGeoDCAT code repository, see its rendered form at https://kurrawong.github.io/anzgeodcat. If viewing the rendered form, the code repository containing this and all other profile resources is at https://github.com/Kurrawong/anzgeodcat

Abstract

ANZGeoDCAT will be a profile of Data Catalog Vocabulary (DCAT) and also of GeoDCAT which is, itself a profile of DCAT.

The Profile's formal definition is at:

- **https://linked.data.gov.au/def/anzgeodcat**

1. Motivations

There are several main motivations for the creation of this Profile:

1. to provide a Knowledge Graph / Semantic Web metadata standard for several new, Australian & New Zealand, geospatial agencies' spatial data catalogues

   a. several agencies are implementing new CKAN instances and CKAN can already export some DCAT metadata. Let's improve that…

2. to ensure geospatial metadata works well with currently emerging non-spatial KG metadata standards

   a. in particular the already formulated Indigenous Data Network Catalogue Profile

   b. perhaps the DCAT-like Office of the National Data Commissioner (ONDC) *Core Metadata Attributes*

3. to ensure Semantic Web geospatial metadata is as interoperable as possible with established

non-Semantic Web geospatial metadata standards

    a. in particular the GA profile of ISO19115-1

4. to show Best Practice metadata profile creation

    a. the Australian geospatial community has a long history with metadata standards and brings considerable experience to profile creation, so we think this represents Best Practice profile creation in Australia & New Zealand

    b. the W3C's Profiles Vocabulary is the standard's body's best effort to provide a standardised profile description model, so ANZGeoDCAT will use that for its definition

5. to present Australian & New Zealand geospatial metadata profile requirements for international profile efforts

    a. the Open Geospatial Consortium is starting a standardisation initiative around Knowledge Graph geospatial metadata with their formalisation of GeoDCAT and we want to be part of that with our requirements already formulated

2. Requirements

Requirements for ANZGeoDCAT as a whole - not the individual requirements for metadata elements as will eventually be specified by the profile - are being gathered in this repository as Issues and progress is tracked via and Project Issue Tracker. Initial Issues, as of December 2022, are also listed in the table below.

ID	Name	Description	Rational	Proponent
R1	Formal Profile	ANZGeoDCAT will be presented as a formally defined Semantic Web profile of DCAT and other standards, formulated according to the W3C's [Profiles Vocabulary](https://www.w3.org/TR/dx-prof/).	ANZGeoDCAT will both utilise the though behind formal profile definition and showcase it for other potential profiles.	ICSM, GA

ID	Name	Description	Rational	Proponent
R2	Two-way mapping to the ICSM ISO 19115-1 Metadata Profile	ANZGeoDCAT data will need to be able to converted to ICSM ISO 19115-1 Metadata Profile data, which is non-Semantic Web XML data, and vice-versa	ANZGeoDCAT is aiming to be a Semantic Web equivalent to ICSM ISO 19115-1 Metadata, so a demonstrable (executable) both-ways mapping must be maintained.	ICSM, GA, GSSA
R3	Interoperability with the Indigenous Data Network's Catlogue Profile	ANZGeoDCAT must be able to work with the IDN CP so that indigenous spatial data can be made conformant to both	Indigeneity and spatiality are different, specialised but potentially overlapping aspects of data and there are dataset known to have both dimensions	Indigenous Data Network
R4	Conformance with OGC GeoDCAT	Eventual alignment with the results of the OGC's current GeoDCAT-AP standardisation effort	ANZGeoDCAT must be conformance with similar international standards, when they are established	ICSM, GA
R5	Mapping to schema.org	Mapping of metadata elements to the general-purpose Knolwedge Graph model schema.org	Search Engine optimisation	KurrawongAI
R6	Mapping to FAIR scores	Calculation of FAIR Scores from ANZGeoDCAT metadata must be possible	To allow for the use of the widely-known FAIR score as a metric for ANZGeoDCAT datasets	Indigenous Data Network, GSSA, GSWA

ID	Name	Description	Rational	Proponent
R7	Linking to Semantic Web spatial data	ANZGeoDCAT metadata, if created for a Dataset that has content in Semantic Web form, must be able to indicate this data and describe it in summary	Australia already has published spatial datasets using DCAT that have their content published in Semantic Web form, e.g. the FSDF's Linked Data form of the ASGS, and they should be handled well by this profile	GA

3. Expected Final Form

The Profile will be a formal (model-defined) profile of DCAT using profile modelling semantics taken from the W3C's Profiles Vocabulary.

The Profile will likely define constraints on the use of DCAT, mappings from DCAT to other models, suggestions/requirements for the use of models related to DCAT, like PROV for provenance, and interfaces with other profiles, such as the Indigenous Data Network's Catalogue Profile.

The Profile will be presented in normative, human-readable form (a specification), machine-readable model form (a model/schema) as well as mappings, supporting vocabularies and so on. Tooling for data validation against the Profile and for metric calculation from Profile data (e.g. FAIR scores) will also be provided.

4. Get Involved

Anyone can get involved with the development of ANZGeoDCAT and we encourage anyone with an interest in this space to participate. Please just contact those listed below to let us know.

Who is already involved

Organisation	Org Description	Role	Contact
Intergovernmental Committee on Surveying & Mapping	Peak Australian & New Zealand spatial data inter-agency organisation	Owner of the Profile & lead coordinating body	Irina Bastrakova
Geoscience Australia	Peak Australian spatial agency	Lead authority and Profile expert	Margie Smith

Organisation	Org Description	Role	Contact
Geological Survey of South Australia	South Australia's geological agency	CKAN catalogue implementer - Profile user	Christie Gerrard
Geological Survey of Queensland	Queensland's geological agency	CKAN catalogue implementer - Profile user	Mark Gordon
Indigenous Data Network	Australian multi-agency collaboration	Alignment with the IDN Catalogue Profile	Sandra Silcot
KurrawongAI	Contract data science / IT company	Coordination and technical establishment	Nicholas Car

Governance

This Profile is being established for the organisations already involved with coordination and technical work resourced by them.

Eventual governance and ownership of this Profile will be determined by the participating organisation but will likely be allocated to perhaps one of the following:

- an Australia & New Zealand spatial consortium - e.g. ANZLIC / ICSM

- a lead agency - e.g. Geoscience Australia

- an informal group of agencies - those participating

Task tracking for this project is done through the gitHub issue tracker associated with this repository. See the "Project" layour of tasks:

- https://github.com/orgs/Kurrawong/projects/1

Licencing & Rights

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Timeline

A first version of ANZGeoDCAT is hoped to be presented in December, 2022. An interoperability experiment using it and conversions to and from it to other standards it expected to be conducted Jan '22 - Apr '23. Apr '23+ will see continued operations and development.