Motivation Statement

A common challenge, when working with research datasets, is the information within them is often difficult to identify, contextualise, interpret and use due to the inconsistent approaches in applying related metadata, or metadata schemas. To fully understand the content within datasets, researchers need metadata that clearly describes, explains, and associates the dataset with various other entities.

Another important issue is the inability to combine different metadata because of the different schemas used, leading to duplicate work, incomplete datasets and more.

We urgently need steps to harmonise data organisations so that integrating data from various sources including the relevant metadata and by using PIDs can be done efficiently and cost-effective.

Approach

The Working Group has produced a directory of descriptive, discipline-specific metadata standards to:

- Promote the discovery, access and use of standards
- Improve the state of research data interoperability and reduce duplicative standards development work

The directory has expanded and updated the Digital Curation Centre (DCC) Metadata Catalogue and is available at the following URL: http://rd-alliance.github.io/metadata-directory/

It offers:

- An easy way to view, propose/add or correct standards
- A collection of use cases
- A collection of extensions
A set of metadata related tools

Outputs

The output of the Metadata Standards Directory Working Group is an online Directory that contains the available metadata standards, extensions, tools and use cases organised in categories.

The Directory is available here: http://rd-alliance.github.io/metadata-directory/

The Tool

The tool is a web page. Identifying, adding and/or editing a metadata standard can be easily done using the tool.

1. The category is displayed in red font
2. The name of the resource is linkable and points to the actual standard or tool or use case
3. The Edit button is available next to each resource and any user (requires GitHub account) can propose a change

Potential impact

The output of the Working Group influences various categories.

- The DCC directory has led to some groups in Europe adopting
  - DCAT (various groups)
  - INSPIRE (various projects using European Space Agency data)
  - Darwin Core (some university bio departments)
  - SDMX (some social science departments – statistical metadata standard)
  - DDI (some universities linked to UKDA (UK Data Archive))

- Promotes the discovery, access and use of standards
- Improves the state of research data interoperability and reduce duplicative standards development work
- Enables researchers to
  - Learn about standards applicable for their research
  - Learn about controlled vocabularies in their community and the elements that comprise these standards and vocabularies
  - Map between elements when combining data from different sources
It led to the proposal of a new Working Group called: **Metadata Standards Catalogue Working Group** which aims to transform and develop the directory into a Metadata Standards catalogue for being exploited from machines and services and to maximise the interoperability among different catalogues.

### Applying the outputs?

The metadata directory was developed aiming to act as a useful tool for researchers. It helps them to find the appropriate standard based on their case.

Any researcher can propose and add a new standard, extension or tool to make it available and visible to potential users.

**YAML[1]** template markdown file is used for adding any new standard, tool or extension

More specifically using the directory a user can:

1. View all the available standards, tools, extensions (xml schemas that extend a specific standard) and use cases. All of them are organised in thematic categories. For each standard there is a description, a summary containing all the needed information and a mapping to the corresponding tools, extensions and use cases
   4. Use cases: http://rd-alliance.github.io/metadata-directory/use_cases/
2. Add a new resource. The directory provides instructions on how a user can add a new resource using the YAML markup. Users must have a GitHub account.
3. Edit an existing resource. When viewing any of the available resources an "edit" button is available next to its title. Any user can click on this button and propose any change. Users must have a GitHub account.

### Related Q&A

- I'm creating metadata in life sciences - do you have a list of recommended ontologies?
- How do I choose a Metadata standard to use?
- How can I transform my XML records into another Metadata Format

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