Open Source Metadata Toolkit: Standards, Translator, Editor

USGS Metadata Reviewers Community

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mdeeditor.org
Introduction

Imagine having an *easy-to-use* metadata authoring tool, that enables an author to focus on describing their data, rather than requiring technical knowledge of standards...
Outline

- Current challenges with metadata standards and tools
- Introduction to the Toolkit project
- Demonstration of mdEditor
- LCC Network implementation experience report
- Q&A, Discussion
- Follow on discussion: Profiles, SDC, testing, training
Challenges with Standards and Tools

- FGDC
- ISO transition
- Breaking free of XML
ADlwg Metadata Toolkit

The ADlwg* Metadata Toolkit is an open source suite of applications for authoring and editing metadata for both spatial and non-spatial projects and datasets. The main goal of the toolkit is to promote the creation and use of metadata by lowering the level of technical expertise required to produce archival quality metadata.

*Alaska Data Integration working group (add-ee-wig)
About ADIwg* (established 2010)

Mission: “The Alaska Data Integration Working Group (ADIwg) was formed by the Alaska Climate Change Executive Roundtable (ACCER) to examine and address the technical barriers to efficiently integrate and share data within and among participating organizations.”

- **Federal**
  - DOI: BLM, BOEM, NPS, USFS, USFWS, USGS

- **State of Alaska**
  - University of Alaska (UAF, UAS)
  - Geographic Information Network of Alaska (GINA)
  - International Arctic Research Center (IARC)

- **Non-Governmental Organizations (NGOs)**
  - Arctic Ocean Observing System (AOOS)
  - Arctic Research Mapping Application (ARMAP) - Nunatech Consulting
  - North Pacific Research Board (NPRB)
  - North Slope Science Initiative (NSSI)

- **Cooperatives/Joint-Ventures**
  - Arctic LCC

*Pronounced add-ee-wig*
Introducing the... **ADIwg ToolKit**

**mdJSON**

Defines

Extensible standard for encoding project and data metadata, based on JavaScript Object Notation (JSON).

JSON Schemas describing the mdJSON standard; Used for structural validation of mdJSON documents.

[github.com/adiwg/mdJson-schemas](https://github.com/adiwg/mdJson-schemas)

[mdtools.adiwg.org](https://mdtools.adiwg.org)

**mdCodes**

Codelists for the ADIwg mdJSON and ISO metadata profile.

[github.com/adiwg/mdCodes](https://github.com/adiwg/mdCodes)

[mdtools.adiwg.org/#codes-page](https://mdtools.adiwg.org/#codes-page)

**mdTranslator**

Open-source Ruby software application for translating between metadata standards. Metadata is input in one of the supported ‘reader’ formats and output in one of the supported ‘writer’ formats.

[adiwg.org/mdTranslator/](https://adiwg.org/mdTranslator/)

[mdtools.adiwg.org/#translator-page](https://mdtools.adiwg.org/#translator-page)

**mdEditor**

Web application for authoring and editing metadata, for both projects and datasets.

[mdeditor.org](https://mdeditor.org)

**ISO, FGDC, HTML ...**

The ADIwg ISO 19139/19115-3 metadata profile. The mdTranslator converts mdJSON into XML adhering to this profile (and other formats, too!).

[github.com/adiwg/adiwg-metadata](https://github.com/adiwg/adiwg-metadata)
mdTools
mdtools.adiwg.org

- Interactive documentation tool for the ADIwg mdJSON schemas
- mdJSON Validator tool to validate using the mdJSON schemas
- Translate using the mdTranslator web API
- View codelists in HTML table, JSON, or CSV formats.

mdTools is an interface for ADIwg metadata tools. The purpose of these tools is to assist with the production of metadata, especially ISO-compliant metadata.

- mdJSON Schema Viewer
  Interactive documentation tool for the ADIwg mdJSON schemas.

- mdJSON Validator
  A tool to validate a metadata file using the mdJSON schemas.

- mdTranslator
  A tool that converts between metadata standards. For example, from mdJSON to ISO 19139. The tool is powered by the mdTranslator webservice.

- mdCodes Viewer
  View mdCodes in HTML table, JSON, or CSV formats.

Check us out on GitHub!
Metadata Editor for Projects and Datasets

- Creates mdJSON compatible with mdTranslator
- Manage multiple records at once
- Re-use metadata components (citations), contacts (person or group), dictionaries
- Import/Export supports managing record “sets”
- Built-in help

metadataeditor.org
LCC Network Science Catalog: Case Study

- Adopt Alaska Data Integration working group (ADIwg) standards and tools
- Build integrated workflow with ADIwg tools and ScienceBase
- Currently supporting all 22 LCCs & Network office
- Arctic LCC Project Tracking System integrated, use by “Alaska” LCCs

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# Timeline

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Release 2.4 of the ADIwg mdJSON standard</td>
<td>Done!!!</td>
</tr>
<tr>
<td>Release 2.9 of the ADIwg mdTranslator</td>
<td>Done!!!</td>
</tr>
<tr>
<td>Release 1.0 mdEditor (now in beta)</td>
<td>2/28/2018</td>
</tr>
<tr>
<td>● Working on Data Dictionary Support</td>
<td></td>
</tr>
<tr>
<td>● Taxonomy will be in release 1.1</td>
<td></td>
</tr>
<tr>
<td>Release FGDC CSDGM reader</td>
<td>Done!!!</td>
</tr>
<tr>
<td>Release FGDC CSDGM writer</td>
<td>2/5/2018</td>
</tr>
<tr>
<td>Complete User Documentation for mdEditor</td>
<td>2/28/2018</td>
</tr>
<tr>
<td>Release ISO 19115-3 writer</td>
<td>5/1/2018</td>
</tr>
</tbody>
</table>
Resources

- **mdEditor**
  - Application: [https://mdeditor.org](https://mdeditor.org)
  - Github: [https://github.com/adiwg/mdEditor](https://github.com/adiwg/mdEditor)
  - Issues: [https://github.com/adiwg/mdEditor/issues](https://github.com/adiwg/mdEditor/issues)

- **mdTools**
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  - Github: [https://github.com/adiwg/mdTools](https://github.com/adiwg/mdTools)
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- **mdTranslator**
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Discussion

- Questions/Discussion
- Testing/training
- Science Data Catalog
- Content Specifications