Guidelines on the TDIS Metadata standard for RBFS

Texas Disaster Information System

Prepared by TDIS

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# Purpose:

This document provides guidelines on the TDIS metadata standards specific to the RBFS data and models uploaded to the Texas Disaster Information System (TDIS).

# Definitions/Acronyms

**Digital Object** - Digital objects may be either simple or complex. Simple digital objects are made up of a single file, such as a PDF or an image, while complex digital objects are made up of multiple files, such as a website or a digitized book. In any case, digital objects include informational content as well as metadata that supports administration, access, and preservation. Source: https://dictionary.archivists.org/entry/digital-object.html

# Background and Context

The registration of digital objects within the TDIS data catalog depends on the creation of robust metadata. TDIS recommends using the metadata schema on GitHub (see link in related resources). While TDIS is, at its core, a web-based data system designed to support disaster preparedness, response, recovery, and mitigation, the use of this system is dependent on the ability to describe, organize, track, discover, and serve the digital objects stored within it. The DQMT (Database Query Management Tool) is one such use case envisioned that will leverage this metadata.

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The general process for registering data in the TDIS data catalog is as follows:

1. Identify the data to be registered: This can include structured and unstructured

data, such as individual files (artifacts), data layers (spatial), and models.

2. **Create metadata:** Once the data is identified, metadata needs to be created using TDISMeta. TDISMeta can be accessed from the URL: <https://tdismeta.cloud.tdis.io/app/>

Please reach out to the TDIS team at [tdis@tamu.edu](mailto:tdis@tamu.edu) for credentials to access the application. Once the metadata has been created, there are instructions to download the .yml file and include into the model directory.

3. **Register the data in the data catalog**: This involves processing the .yml file included in the model files to catalog the model package.

4. **Validate the metadata:** After model package has been cataloged in the data catalog, the metadata needs to be validated to ensure it is accurate and complete. Reviews include checking the metadata for errors and inconsistencies and making corrections as necessary.

5. **Update the metadata:** The metadata in the data catalog needs to be maintained and

kept current to ensure that it remains accurate and relevant. Metadata updates are

necessary when changes are made to the digital object, such as when new data is

added or the data format changes.

6. **Search and discover data**: Once the data is registered in the data catalog and its

metadata is validated and up-to-date, users can search and discover the data

through the DMQT tool at the following URL: <https://dmqt.cloud.tdis.io/>. A user can self-register to gain access to the tool.

# Minimally Required Metadata

Fields from the current TDIS metadata schema that are minimally required.

Notes & Useful links:

Please check the control terms link below to see if a metadata field has controlled terms and if so what value are allowed.

Published metadata documentation: https://github.com/TexasDIS/metadata

Field descriptions: <https://github.com/TexasDIS/metadata/blob/main/tdis_metadata_field_documentation.md>

Controlled terms: https://github.com/TexasDIS/metadata/tree/main/controlled\_terms

A sample yaml with these fields: <https://github.com/TexasDIS/metadata/blob/main/examples_and_templates/tdis-minimum-viable-metadata.yaml>

Basic Descriptive Information:

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Field** | **Required/Optional** | **Applies to these Digital Objects** |
| 1 | Region | Required | Collection, Artifact, Layer, Model |
| 2 | HUC | Required | Collection, Artifact, Layer, Model |
| 3 | County | Required | Collection, Artifact, Layer, Model |
| 4 | City | Required | Collection, Artifact, Layer, Model |
| 5 | Title | Required | Collection, Artifact, Layer, Model |
| 6 | Description | Required | Collection, Artifact, Layer, Model |
| 7 | Purpose | Optional | Collection, Artifact, Layer, Model |
| 8 | Creator | Required | Artifact, Layer, Model |
| 9 | Keyword Term | Required | Collection, Artifact, Layer, Model |
| 10 | Update Frequency | Required | Artifact, Layer, Model |
| 11 | Use Constraints | Required | Artifact, Layer, Model |

Contact Information:

|  |  |  |  |
| --- | --- | --- | --- |
| 12 | Contact Affiliation | Required | Collection, Artifact, Layer, Model |
| 13 | Contact Department | Required | Collection, Artifact, Layer, Model |
| 14 | Contact Email | Required | Collection, Artifact, Layer, Model |
| 15 | Contact Name | Required | Collection, Artifact, Layer, Model |
| 16 | Contact Phone Number | Required | Collection, Artifact, Layer, Model |

Spatial Information:

|  |  |  |  |
| --- | --- | --- | --- |
| 17 | Spatial Data Type | Required | Layer |
| 18 | Spatial Extent | Required | Collection, Layer, Model |
| 19 | Boundary Name | Required | Layer, Model |
| 20 | Horizontal Coordinate System\* | Required | Layer |

Models:

|  |  |  |  |
| --- | --- | --- | --- |
| 21 | Model Software Name | Required | Model |
| 22 | Model Software Version | Required | Model |
| 23 | Model Type | Required | Model |
| 24 | Model Input | Optional | Model |
| 25 | Model Output | Optional | Model |
| 26 | Model Config File | Required | Model |

\*Recommended coordinate reference system is WGS\_1984\_World\_Mercator, WKID=3395

# Folder and Metadata file naming

* When the metadata file is downloaded using TDISMeta, a filename is automatically generated. No changes need to be made for the name. The metadata file has to be stored in the directory where the model files exist. Every model in the model package that needs to be cataloged needs to have an associated metadata file.
* The metadata filenames are automatically generated when using TDISmeta. In the case of datasets where metadata is being provided and the .yml file is created manually please include **metadata\_** as the prefix to the filename. The .yml file needs to be saved in the same directory as the dataset or model.

# Applicability of these guidelines

These guidelines apply to study Phases 3.

# How often these guidelines will be updated

These guidelines may be updated no more than once a month as we get feedback from GLO, TIFF, CHARM, TWI, the RBFS region vendors, the TFMR vendor and other stakeholders and collaborators.

# Change Log.

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| --- | --- | --- |
| **Date** | **By** | **Change** |
| 11/13/2023 | AT | Added metadata attribute for Horizontal Coordinate System |
| 11/13/2023 | AT | Added the section Folder and Metadata file naming |
| 11/13/2023 | AT | Update applicability of these guidelines to Phase 3. |
| 12/12/2024 | VG | Updated metadata fields to include region, huc, county and city |
| 12/12/2024 | VG | Updated metadata guidance for naming and included information regarding TDISMeta |
| 05/29/2025 | VG | Updated metadata guidance to include TDISMeta details |

*Please send questions, comments and feedback to tdis@tamu.edu*