

Documenting Environmental Data

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Session Overview

- Session focused on:
 - The documentation of NOAA Observations and Products using several dialects (standards)
 - The development of a community for sharing experiences, expertise and tools to support that effort

Session Objectives

1. Increase awareness of the benefits of standard approaches to documentation early in the data lifecycle
2. Introduce GEO-IDE Wiki as an environment for sharing information about experiences, expertise and tools
3. Identify a handful of micro-pilots that build bridges between existing documentation approaches and familiarize members of the community with current work across NOAA and partners in the global environmental community
4. Focus attention on connecting existing documentation to national and international portals (GeoSpatial One-Stop, Data.gov, and GEOSS)

Key Points of Discussion

- Swaths, profiles - spatial extents
- Describing Complex Processing (Transparency)
- Identifiers / Pointers / Restful Interfaces
- Specialized documentation for multiple communities (what % custom?)
 - standards support sharing across unexpected communities/applications
- Transformation tools/mechanisms / strategies

Answers?

1. Top Documentation Priorities

We are interested in focusing on the most common documentation needs and implementing and addressing these needs with various standards.

1. Choose your top documentation needs for your data:

- | | |
|--|--|
| <input type="checkbox"/> Do you need different documentation for different parts of your data? | <input type="checkbox"/> <u>Do you want to manage metadata using a relational or XML database?</u> |
| <input type="checkbox"/> Do you need different documentation for different temporal and spatial subsets? | <input type="checkbox"/> Do you want to serve metadata using a REST web service? |
| <input type="checkbox"/> <u>Do you have datasets with multiple sources?</u> | <input type="checkbox"/> Do you need to identify people in different roles? |
| <input type="checkbox"/> Do you need to reference On-Line Resources? | <input type="checkbox"/> Do you need to keep track of user problems? |
| <input type="checkbox"/> Do you need to describe a series of related granules? | <input type="checkbox"/> <u>Do you need to explain why you did things to the data?</u> |
| <input type="checkbox"/> Do you need to describe many kinds of aggregations? | <input type="checkbox"/> Do you need to track requirements and plans? |
| <input type="checkbox"/> <u>Does data quality vary within the dataset?</u> | <input type="checkbox"/> <u>Do you need to share data with international and national partners?</u> |
| <input type="checkbox"/> Do you need to track processing for multiple data sources? | <input type="checkbox"/> Do you need to describe data formats and structures? |
| <input type="checkbox"/> Do you need to track compliance with standards? | <input type="checkbox"/> Do you need to track data transformations and processing? |
| <input type="checkbox"/> Do you need to use spatial features to describe quality, like grids of quality flags? | <input type="checkbox"/> What might the entity and attributes look like for station |
| <input type="checkbox"/> Do you need to explain why you did things to the data? | <input type="checkbox"/> Do you have effective data and metadata management plans in place? |
| <input type="checkbox"/> <u>Do you have data that are collected from multiple geographic locations?</u> | <input type="checkbox"/> <u>Do you have a need for tools to assist with creating, validating and publishing your data in standard formats?</u> |
| <input type="checkbox"/> Do you need to describe instruments used to make observations? | <input type="checkbox"/> <u>Do you need training on using various documentation standards?</u> |
| <input type="checkbox"/> Do you need to unambiguously identify things using your own namespace? | |

Documentation Needs: <http://www.surveymonkey.com/s/QP5MB9K>

Q and A: https://www.nosc.noaa.gov/dmc/swg/wiki/index.php?title=Use_Cases_to_CRUD

Observing System ISO: <http://www.ngdc.noaa.gov/metadata/published/19115/NOSA/1list.html>

Multi-dimensional Grids: http://www.ngdc.noaa.gov/metadata/published/19115/NESDIS_Products/1list.html

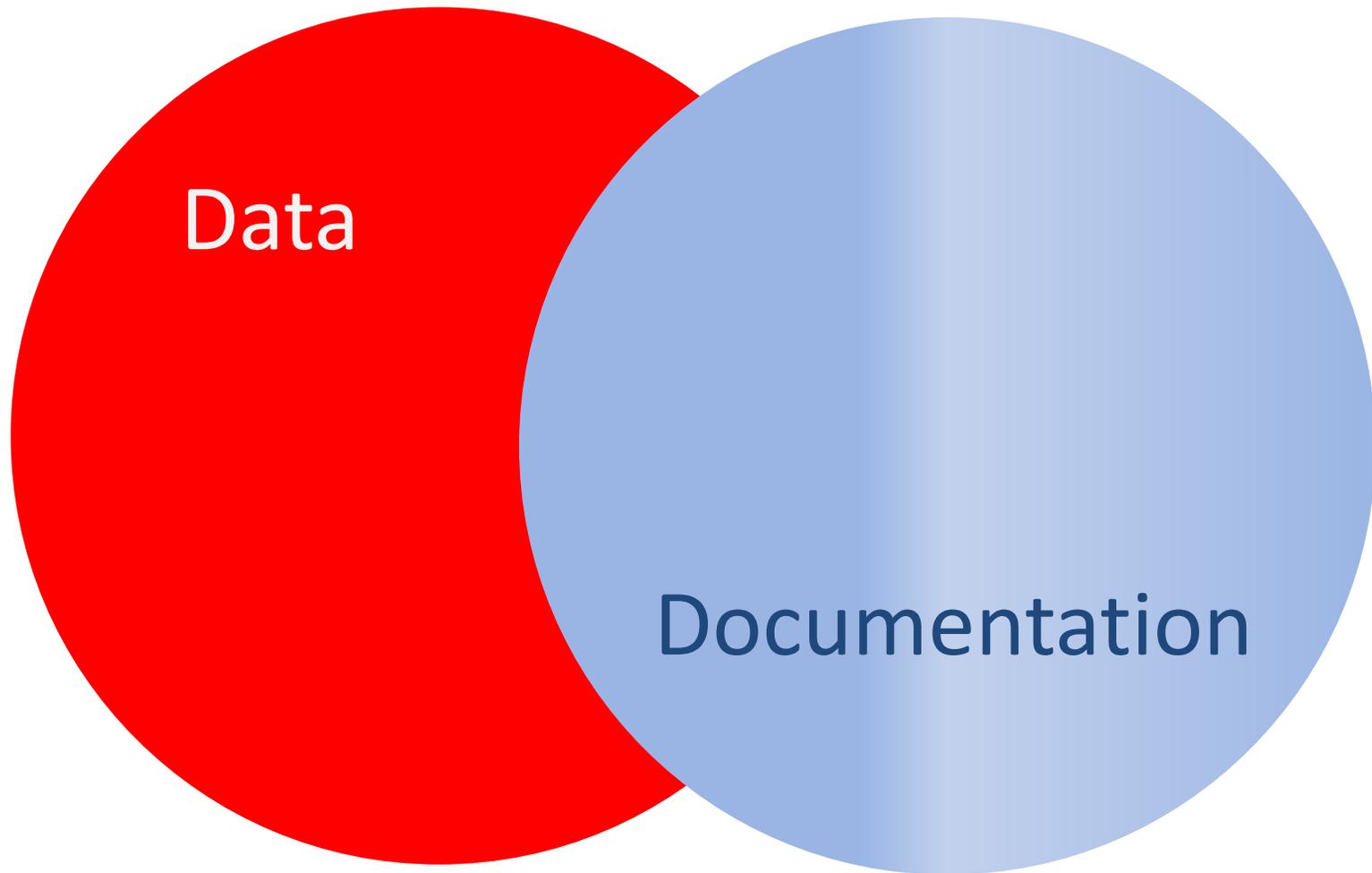
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Next Steps

The screenshot displays three overlapping browser windows from Mozilla Firefox, illustrating the navigation path to the ISO 19115 category page on the NOAA GEO-IDE Guidelines and Best Practices Wiki.

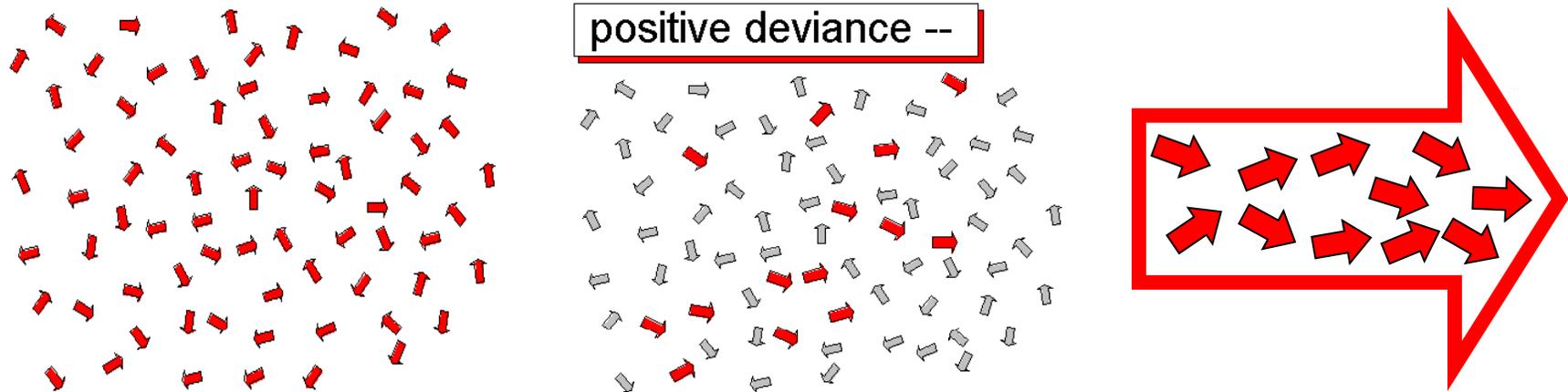
- Top Window (Main Page):** Shows the main navigation menu. The **Categories** link is circled in red.
- Middle Window (Categories):** Shows a list of categories. The **ISO 19115 (79)** link is circled in red.
- Bottom Window (Category:ISO 19115):** Shows the category page with a list of 54 pages. The list includes:
 - B**
 - Buoy Metadata and Aggregation
 - C**
 - Conformance Test Results
 - Coverages and ISO Metadata
 - Creating Good Documentation
 - D**
 - Data Transformations and Processing
 - Datasets With Multiple Sources
 - Deep-ocean Assessment and Reporting of Tsunamis
 - Describing Networks with ISO Standards
 - Disjoint Datasets
 - F**
 - File Formats and Structures
 - Florida Current Transport
 - G**
 - GOES-R Metadata
 - GTIMBA
 - I cont.**
 - ISO 19115 Identification Information
 - ISO 19139 Identifiers
 - ISO Aggregation
 - ISO Aggregation Information
 - ISO Boilerplate
 - ISO Components
 - ISO Data Quality
 - ISO Dataset Series
 - ISO Dates
 - ISO Example - SST50
 - ISO Examples
 - ISO Extents
 - ISO Identifiers
 - ISO Lineage
 - ISO Object Ordering
 - ISO Objects
 - ISO Online Resources
 - ISO People
 - ISO Scope Codes
 - I cont.**
 - ISO Topic Categories
 - Instruments
 - J**
 - Joint Archive for Sea Level
 - M**
 - Metadata Opportunities and Use Cases
 - N**
 - NetCDF Attribute Convention for Dataset Discovery
 - O**
 - OceanSITES
 - P**
 - PIRATA
 - Platforms
 - R**
 - RAMA

Row Level Metadata / Quality Coverages



Blurring the distinction between data and documentation

Leadership Model: Positive Deviance



Positive deviance says that if you want to create change, you must scale it down to the lowest level of granularity and look for people within the social system who are already manifesting the desired future state. **Take only the arrows that are already pointing toward the way you want to go, and ignore the others. Identify and differentiate those people who are headed in the right direction. Give them visibility and resources. Bring them together. Aggregate them.** *Barbara Waugh*