ARM Standards Committee Meeting Notes

Nov 12, 2012

Summary of assumed current ARM standard
Discussion of current assumed ARM standards

Define Scope of Standards Document
What will be the scope of this project

Define Standards for:

- Data file naming format
- NetCDF data file DOD format
- ARM Metadata
- Procedures for creating new datastreams
- RAW data file naming
- RAW data file formats
- ARM data class naming

Documenting Standards
- How to document the final standards
- Definition of the standard
- Reason for the standard
- Example of the standard
- How to use the standard in automated processing
- [Code snippets to use the standard]

Absolute vs. Recommended standards
The committee will separate the standards into two groups; absolute and recommended.
Absolute standards will be required to be in compliance, while recommended standards
will aid the ARM program and individual developers through consistency and taking
advantage of code reuse and documentation.

- Penalty for not conforming to Absolute Standards
- Benefit for conforming to Recommended Standards

Datastream Naming

Setting rules for naming convention to work with existing infrastructure

- Commonality
- Archive database compliance
- Extracting metadata from file name

Compliance with Climate Forecast conventions

Discussion of NCAR Climate Forecast (CF) 1.6 MetaData Convention document and where ARM can adopt the recommended conventions

Variables and coordinate variables

- Commonality
- Variable naming
- Coordinate variable naming
- Rules for constructing and reusing variable names
- Lowercase letters, numbers, underscores
- Concise naming, reusing to match other datastream names
- Naming hierarchy (ie. super prefix, prefix, measurement, subcategory, medium)
- Maintaining history
- Variable order

Attribute naming

- Commonality
- Attribute naming criteria
- Attribute values (ie., units, possible states)
- Standard value format for parsing/extraction of information
- Required vs. recommended
- Documenting state (ie. Flag variables)
- Documenting direction, positive direction, and orientation (ie. Upward vs. Downward pointing radiation instruments)
- Documenting resolution (ie. bin, height, altitude, time-average)
- Common unit descriptor (ie. using NCAR's udunits)

Quality Control variables

Bit packed qc_<field>, aqc_<field>

- Commonality
- Naming
- Absolute vs. recommended attributes
- Attribute naming and values

● Standard value format for parsing/extraction of information

Adding DQR QC information into VAPs.

Global Variables
● Commonality
● Standard vs. optional global attributes
● New global attributes
● Standard value format for parsing/extraction of information

Exceptions to Standards process
Process to handle exceptions to the standards

Reprocessing
Define reprocessing events

● Commonality
● When to reprocess
● What needs to be updated when a reprocessing task occurs
● Documenting the changes from a reprocessing event
● User notification
● End-to-end reprocessing vs. subset reprocessing