Remote Data Access Update

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DAP4

- We are deep into the process of specifying and implementing a new version of the DAP protocol called DAP4 (for version 4).

- Extends the DAP2 data model to be essentially equivalent to CDM

- Allows DAP4 URLs in netCDF to access data using the full netcdf-4 API

- Completely new serialization format

- Much more powerful query language.

  - Server-side functions

- Underlying transport protocol defaults to HTTP

DAP4 Versus DAP2

- New atomic types:
  - Unsigned integer types
  - Enumeration
  - Opaque
- Groups
- Shared dimensions
- Variable length dimensions
- Grids are replaced with a more general "maps" concept
- Sequences are replaced by variable length dimensions

Capabilities and Negotiation

- The capabilities document
  - Returns detailed information about a dataset
  - Somewhat similar to the current Thredds catalog entry.
  - Information is specific to DAP4 e.g.
    - What formats are available?
    - Does this dataset require asynchronous access?
    - What kind of queries are supported?
- Negotiation
  - Allows a client to try to obtain data in a format other than the default (which is XML plus binary)
    - E.g. HTML, Text, JSON, netCDF, etc.

Questions?