

NetCDF in SeaDataNet Development Process

Roy Lowry

BODC

Outline

- Objectives
- Methodology
- Progress to Date
- Future Work

Objectives

- Specify a CF 1.6 compliant NetCDF encoding for data delivery following a CDI search
- This will:
 - Provide a NetCDF alternative to ODV ASCII and MEDATLAS
 - Facilitate delivery of data that cannot be encoded into existing formats (e.g. grids, high volume data)
- Maintain the CDI linkage and standardised semantics available in the existing formats
- Take account of interoperability with MyOcean and point data NetCDF in the USA and Australia

Methodology

- Group of experts recruited from
 - SeaDataNet Technical Task Team
 - OceanSITES/MyOcean
 - UNIDATA (including the author of the CF point data conventions)
 - USNODC (USA)
 - IMOS and METOC (Australia)
- Group developed specifications through an e-mail discussion list

Methodology

- Development of SeaDataNet profiles for CF 1.6 feature types such as:
 - Profiles (e.g. CTD)
 - Time series (e.g. sea level)
 - Trajectories (e.g. thermosalinograph)
 - Profile time series (e.g. moored ADCP)
 - Profile trajectories (e.g. vessel-mounted ADCP)

Methodology

- Profiling process involves
 - Imposition of standardised naming conventions (based on MyOcean)
 - Hardening up CF by making more attributes mandatory
 - Inclusion of SeaDataNet namespace variables and attributes

Progress to Date

- SeaDataNet profiles have been designed for:
 - Profiles
 - Time series
 - Trajectories
- Specifications have been written up as draft format documentation

Future Work

- SeaDataNet profiling for remaining feature types
- Consider requirements for gridded data profiling
- Consider profiles for data with a non-spatio-temporal dimension (e.g. wave spectra, spectral light data, etc.)
- Develop a specification for semantically-aware aggregation