Data Access Services

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Session Overview

- Session focused on:
  - The approaches to delivering environmental data to customers/users via a variety of web services.
- Basic agenda:
  - Welcome/opening remarks (15 min)
  - 3 topics, ~30 min each, mostly open discussion:
    - Data access services
    - Data formats
    - Catalogs/Data discovery
  - Wrap-up/action items/closing remarks (30 min)

Session Objectives

1. Highlight current approaches to providing access to environmental data

2. Discuss opportunities, strengths, weaknesses, and limitations in delivering web services within NOAA

3. Recommend approaches to encourage convergence within NOAA

Data access services *(rows 12-17)*

- Gridded data request service
  - Good agreement on use of DAP/OpenDAP
    - Often with TDS for DAP + WCS in same package
    - Some use of FTP
- Feature data (points, profiles, trajectories)
  - Less agreement on data request service
    - SOS, custom HTTP, OpenDAP, THREDDS (TDS?), ftp
- Subscription services:
  - No agreement
- Map requests: WMS?
  - *(accidental omission)*

DAP = Data Access Protocol.
OGC = Open Geospatial Consortium.
SOS = OGC Sensor Observation Service.
TDS = THREDDS Data Server.
THREDDS = Thematic Realtime Environmental Distributed Data Services.
WCS = OGC Web Coverage Service.
WMS = OGC Web Map Service.

Data formats *(rows 19-21)*

- Gridded data formats
  - Good agreement on use of CF/NetCDF
  - Some use of ASCII CSV, GRIB, BUFR
- Feature data (points, profiles, trajectories)
  - Less agreement on formats
  - ASCII CSV/TSV (probably with different conventions)
  - Some NetCDF (presumably w/CF point conventions)
  - XML variants (GML, KML, JMBL)

Key Points of Discussion

- *Good agreement on services & formats for structured grids.*
- *More disparity regarding features (in situ data).*
- *Little use of public subscription services (data feeds).*
- *Should agree on requirements for service functions before choosing specific services.*
- *May need multiple options for different customers.*
- *Need more than architecture and overly detailed plans--need software implementations that are easy to deploy and meet IT security requirements.*
- *Don't forget about video and still imagery* data types.

Next Steps

- *Continue and increase discussion and collaboration between CIO level and working level.*
- *Draft the guidance that we would like to see from CIO, rather than waiting for a decision made without our input.*
- *Consider whether program narratives (e.g., PPBES/SEE) should include new section on data management.*
- *Explore ways to establish shared resources or pool of funds for data management.*