

# OGC Standards in NOAA: Looking Across the Chasm

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NOAA National Geophysical Data  
Center



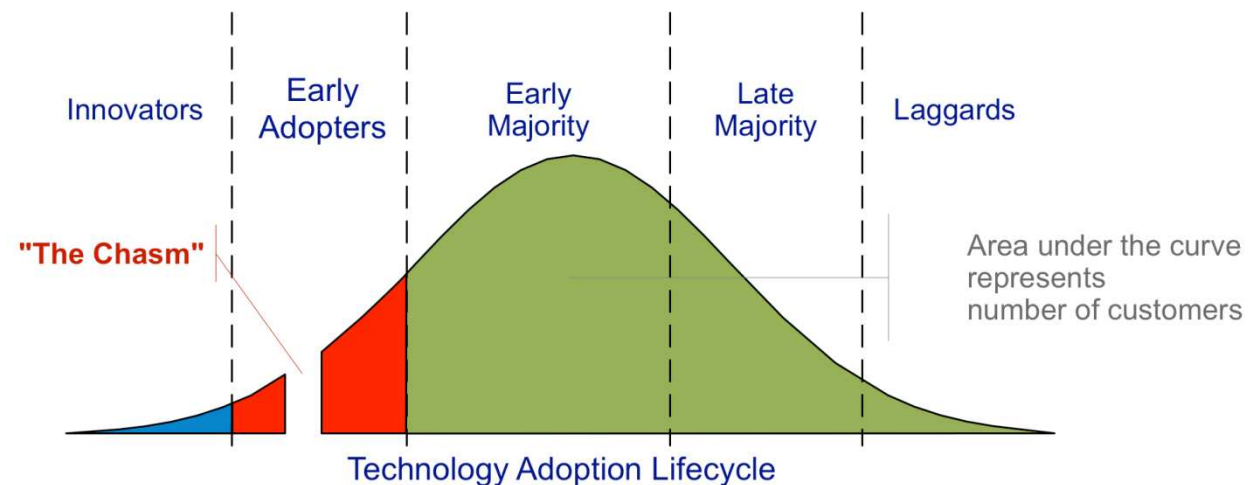
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# The Chasm



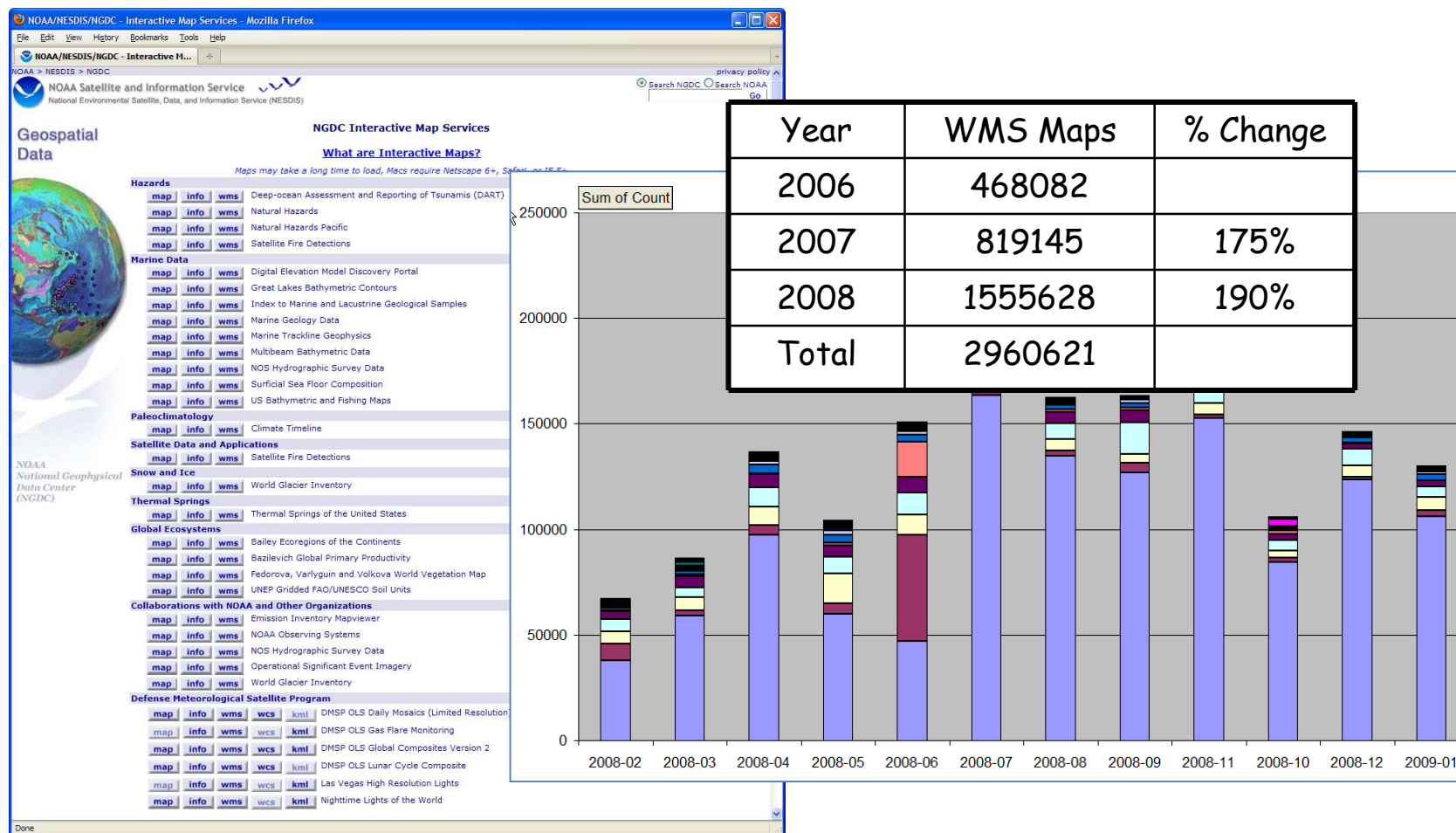
Open Geospatial Consortium Standards have been used by innovators and visionaries in NOAA for many years. Crossing the chasm to the early adopters requires establishing a beachhead. I will describe a few candidates.



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# WMS Maps at NGDC



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# Other Interfaces to NGDC Data

The image shows two web browser windows side-by-side. The left window, titled 'Explore Our Planet - US, Newhall - Mozilla Firefox', displays a map of the United States with various data points overlaid. The right window, titled 'ICEDS Web Portal - Mozilla Firefox', shows a world map with a color-coded scale from 0 to 9642 m. A sidebar on the right lists 'Available WMS layers' with checkboxes. The 'World Natural Hazards (NOAA)' section is circled in red, containing 'Significant Earthquakes', 'Tsunami Events', 'Volcanoes', and 'Plate Boundaries'. Below the map, there are navigation controls, a search bar, and a 'Find' button. The status bar at the bottom indicates 'Transferring data from iceds.ge.ucl.ac.uk...'.

Explore Our Planet - US, Newhall - Mozilla Firefox

ICEDS Web Portal - Mozilla Firefox

ICEDS - Integrated CEOS European Data Server

UCL

Available WMS layers

- ☒ Map Dressing (IONIC)
- ☐ Current Weather (CustomWeather)
- ☐ Global clouds (CustomWeather)
- ☐ GFS surface winds
- ☒ World Natural Hazards (NOAA)
  - ☐ Significant Earthquakes
  - ☐ Tsunami Events
  - ☐ Volcanoes
  - ☐ Plate Boundaries
- ☐ Water features (GLOBE)
- ☐ Administrative Info (NOAA)
- ☐ SRTM water bodies mask
- ☐ DMSP Nighttime Lights
- ☐ USGS ASTER DEM footprints
- ☐ African geological maps (SIGAFRIQUE)
- ☒ SRTM elevation

Select the layers from the above list, then scroll down and click on the button to update the map

For the complete list of WMS URLs please click [here](#)

More info on the ICEDS project is available [here](#)

UCL ©  
[Help](#)  
&  
[Credits](#)

Find:  Find Next Find Previous Highlight all Match case

Transferring data from iceds.ge.ucl.ac.uk...



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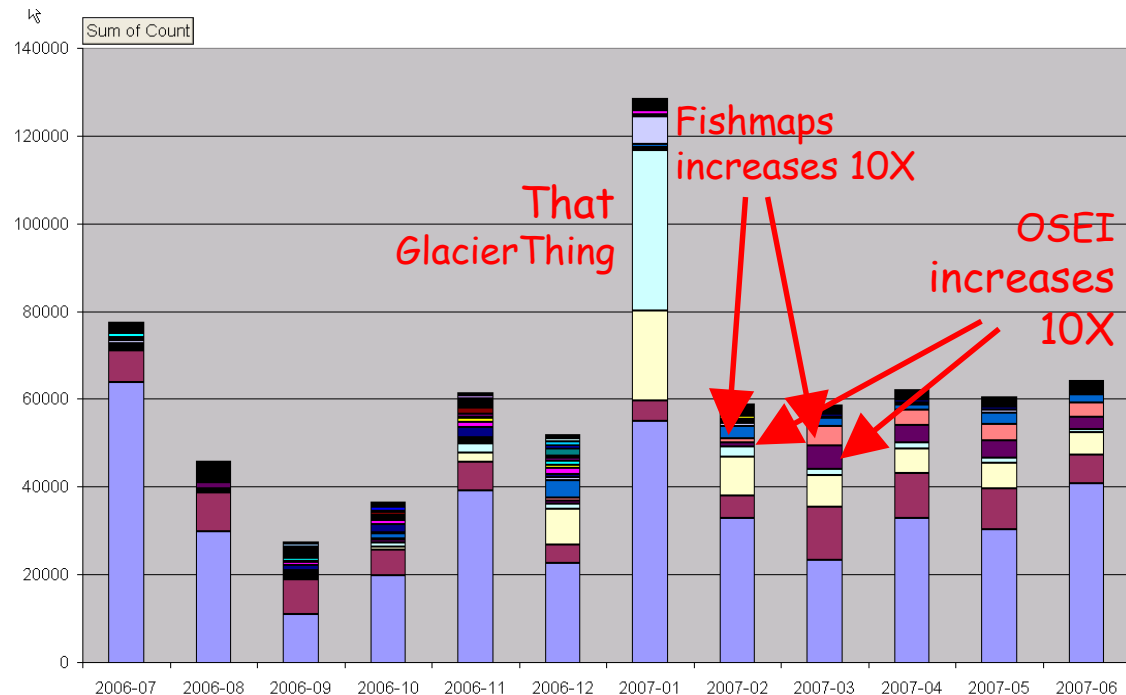
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# Usage Surprises

## That Glacier Thing:

One user had 31,000 hits on a glacier map as they learned how to use WMS.

**Layer Mining:** Users were using services for background layers instead of data layers.



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# Other WMS

The screenshot displays several overlapping web browser windows from the Mozilla Firefox era. The primary window in the foreground shows the 'Web Map Service - GEO-IDE Guidelines and Best Practices Wiki' page, which details the 'Web Map Service' standard. This page includes sections for 'Standard name', 'Authority responsible for the standard', 'Purpose/application', 'Data type(s) to which the standard would apply', and 'Significant applications (within and outside NOAA) currently using the standard'. A list of applications includes NOSA WMS, NGDC WMS, National Weather Service National Data Buoy Center, Electronic Nautical Charts WMS, National Climatic Data Center Web Map Services, Defense Meteorological Satellite Program Online Map, and National Coastal Data Development Center Map Service. Other visible windows include 'NDBC - PROTOTYPE IOOS® Web Map Service (WMS)', 'ERDDAP - WMS for COADS Surface Marine Observations, Release 2, 1854-1993', and 'NOAA/NESDIS/NGDC - Interactive Map...'. A sidebar on the left of the main window lists various NOAA programs and services like 'Observations', 'Program Info', and 'FAQ'.

## Tools:

ESRI ArcIMS / ArcGIS Server  
Environmental Research Division's  
Data

Access Program (ERDDAP)

THREDDS Data Server (ncWMS)



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# Sensor Observation Services

The screenshot shows the NOAA Sensor Observation Service (SOS) website. The browser window is titled "Sensor Observation Service - GEO-IDE Guidelines and Best Practices Wiki - Mozilla Firefox". The page content includes a sidebar with navigation links, a search bar, and a main content area with the following sections:

- Contents** (show)
- Standard name**  
Open Geospatial Consortium (OGC) Sensor Observation Service
- Authority responsible for the standard**  
[Open Geospatial Consortium](#)
- Purpose/application**  
Geospatial data transport
- Data type(s) to which the standard would apply.**  
Geospatial coverages
- Significant applications (within and outside NOAA) currently using the standard**
  - [National Weather Service National Data Buoy Center IOOS® Sensor Observation Service \(SOS\)](#)
  - [National Ocean Service Center for Operational Oceanographic Products & Services \(CO-OPS\) IOOS Sensor Observation Service \(SOS\)](#)
- Existing software tools that support the implementation of the standard.**
- Detailed description/definition of the standard.**  
[OGC Description](#)

A text box on the right side of the page highlights the following tools:

**Tools:**  
In-house Tools  
OOSTethys  
"cookbooks"



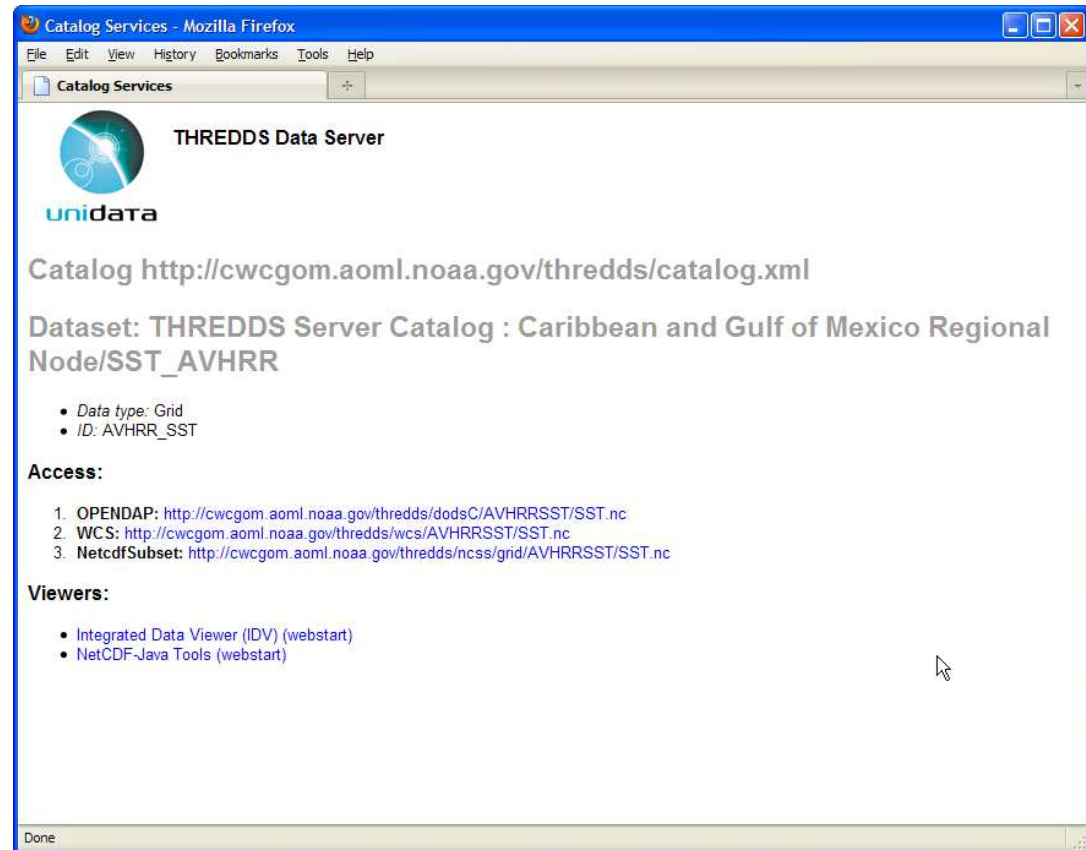
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# Web Coverage Service

## Tools:

THREDDS Data Server  
Minnesota Map Server  
NNEW WCS

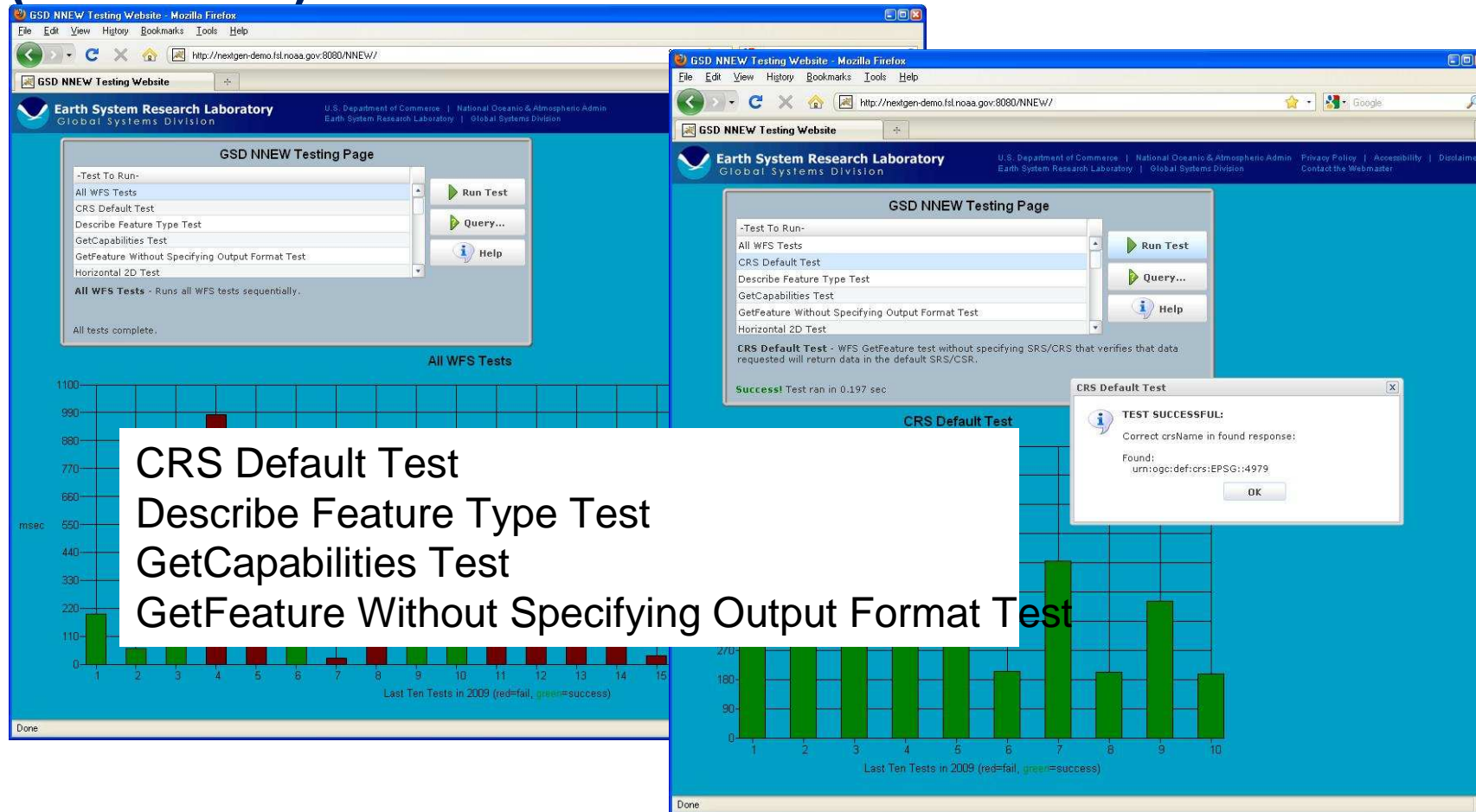


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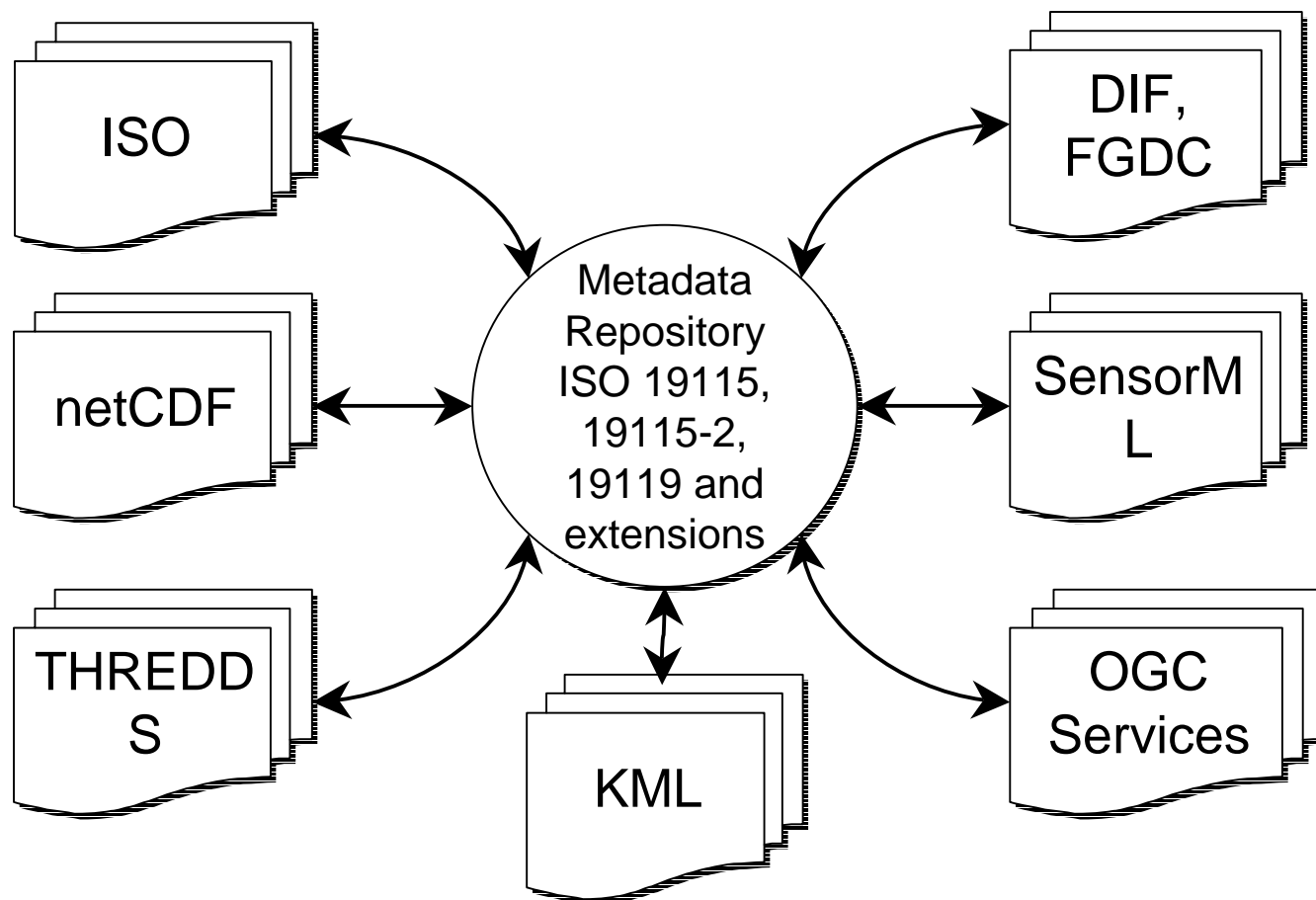
# Web Feature Service Testing (NNEW)



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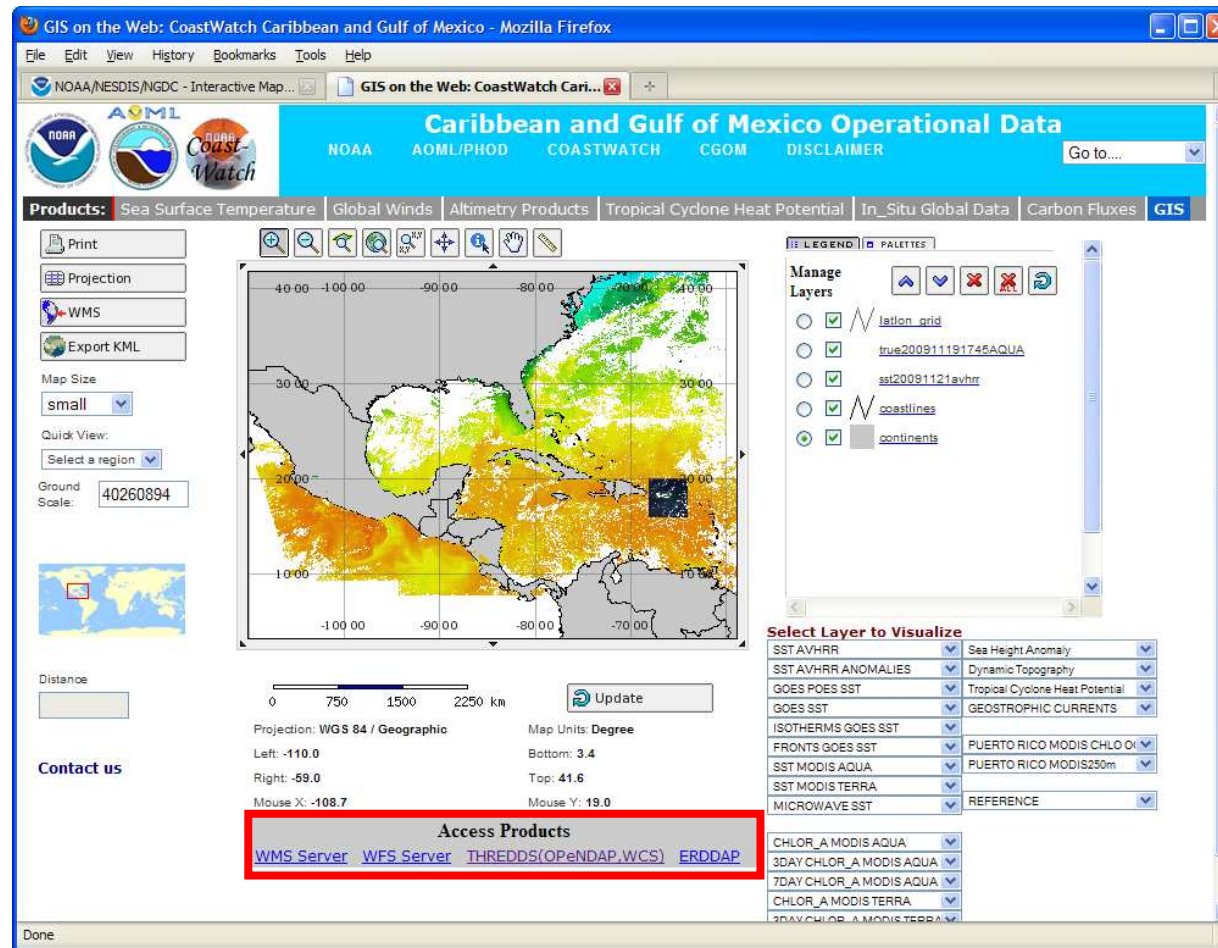
# Metadata – Bringing the Pieces Together



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# Multiple Access Paths



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# Organizational Developments

## OGC Membership

Planning Committee

## OGC Working Groups

Coverages

Data Preservation

Data Quality

Earth Systems Science

NetCDF

Metadata

Meteorology/Oceanography

Sensor Web Enablement

Web Feature Service



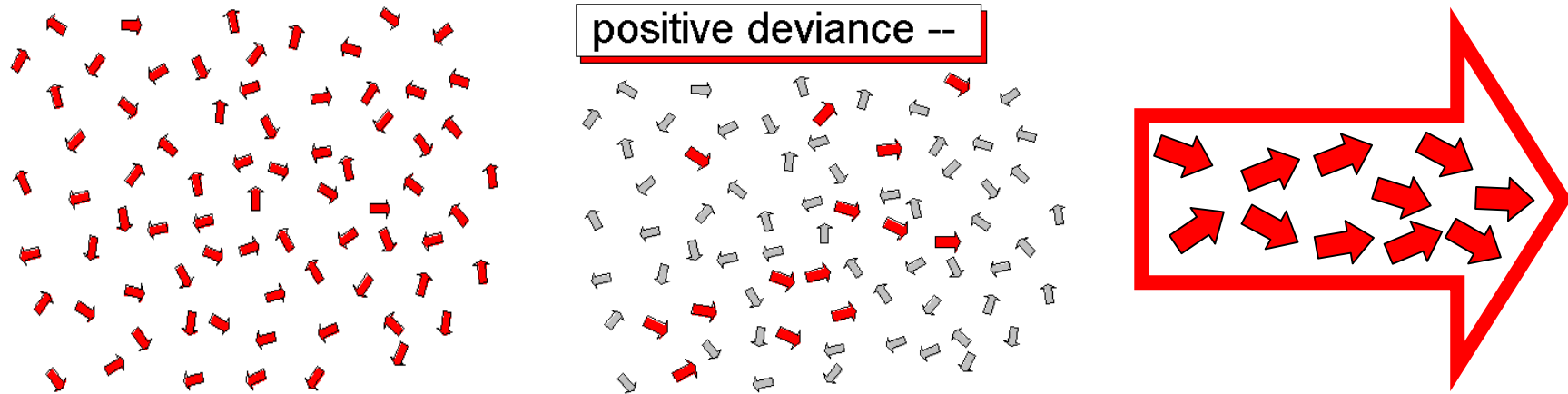
**OGC Meeting Next Summer  
in Silver Spring!**



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# 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.**



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