

IOOS Catalog Use Case (2010)

Current situation: For each IOOS server:

- Get table of contents
- Find buoys that measure salinity
- Find buoys that are in the mid-Atlantic
- Get data from those buoys

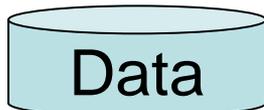
Where are there salinity observations for the mid-Atlantic?



The good news: Each of these steps works the same on each server, and the information is consistently formatted.

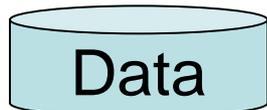
More good news: Software could automate the search, create an IOOS Catalog, and display search results on an IOOS Viewer.

IOOS server



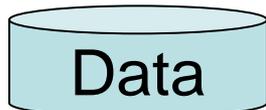
NDBC

IOOS server



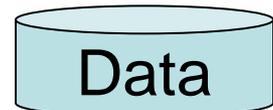
CO-OPS

IOOS server



SECOORA

IOOS server



AOOS

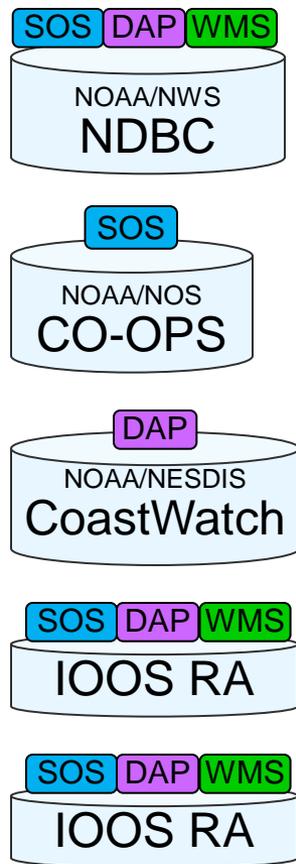
IOOS server



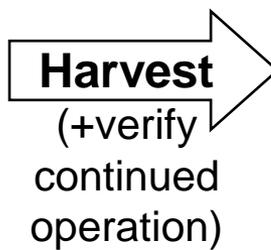
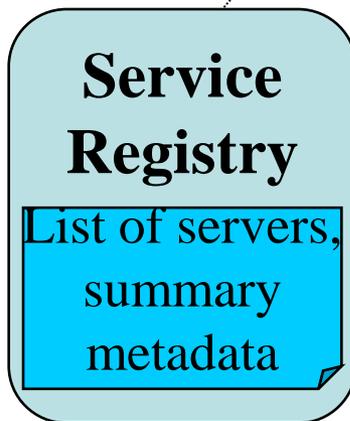
others...

IOOS Catalog Concept of Operations

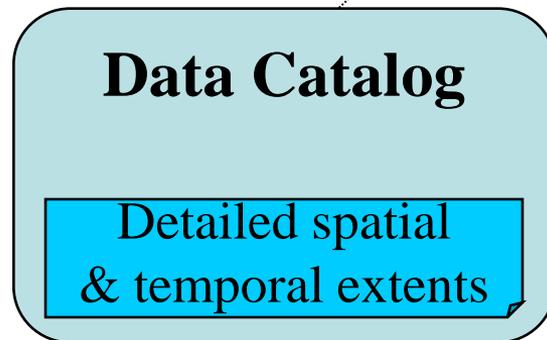
IOOS Data Servers



GeoNetwork



PostgreSQL/PostGIS



Service Metadata (ISO 19119)

US geodata.gov, GEOSS CSR

Dataset Metadata (ISO 19115)



IOOS Catalog

IOOS Catalog - Mozilla Firefox

Edit View History Bookmarks Tools Help



INTEGRATED OCEAN OBSERVING SYSTEM

1425 Platforms 18 Services.

Data Types:

Recent observations w/in:
 No recent observations

Properties:

Servers:

Regions:

Data Providers:

Click the platforms for in-situ observations.
Click bounding boxes for gridded info.

Search by bounding box mode.
(Click bounding box to filter platforms)

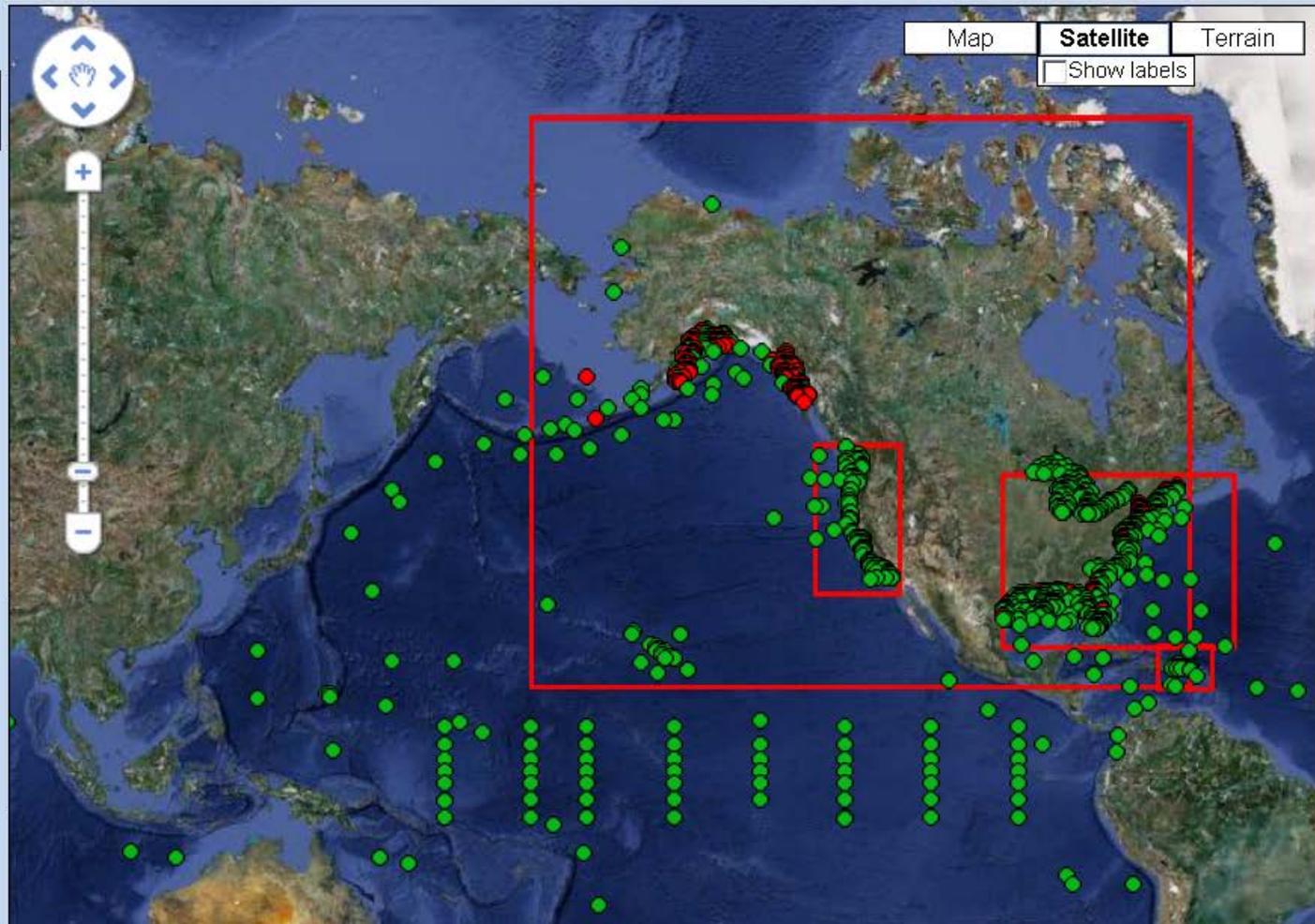
Filter By Date

Start:

End:

Cluster platforms

Bookmark this view (right click this link.)



Links from Catalog to Data

IOOS® INTEGRATED OCEAN OBSERVING SYSTEM

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Data Providers by Server
All

Map Satellite Terrain

National Data Buoy Center SOS
Organization: [National Data Buoy Center](#)
Data Provider: National Data Buoy Center
Platform: 41035
Service Type: In-situ
Onslow Bay, NC
Lat: 34.48 Lon: -77.28
Starts: 2007-11-02 04:00:00 Ends: now
Last observation was: 2010-06-16 13:50
Waves: 0.39 m, 8.33 s at 2010-06-16 13:50
Winds: 1.10 m/s, 44.00 deg at 2010-06-16 13:50
WaterTemperature: 26.70 C at 2010-06-16 13:50
Currents: 13.00 cm/s, 24.00 deg at 2009-07-25 22:50
(Times are UTC)
[Links to Additional Data](#)
[41035 Platform Description XML](#)

Existing Features

- **URL: <http://www.ioos.gov/catalog/>**
- **3 NOAA providers & several RAs registered**
- **Basic map-based data discovery**
- **Display locations of in-situ stations and bounding box of gridded datasets**
- **Links back to data sources**
- **Ability to search by phenomenon, time, bounding box, data provider**

Planned Features

- **Registration of additional RA servers**
- **Improved map UI & controls (incl. MSIE perf. issue)**
- **Possible change GeoNetwork > ESRI GeoPortal Toolkit**
- **Query API (CS/W? SRU? WFS Simple?)**
- **Form-based search UI and textual responses**
- **Better/more helpful links back to data**
 - Multiple stations at once
 - Multiple providers at once
- **Basic visualization capabilities**
 - Esp. maps, maybe time series
- **Status reporting based on routine harvests**
- **Inventory including assets not on SOS/TDS**
- **Better display of mobile platforms (gliders, VOS)**

Discussion Topics

- **Whose SOS & DAP servers can we add next?**
- **Any features we should add?**
- **What query API & response format?**
- **What can we reuse from RA development?**
 - Icon set
 - Software components (esp. visualization)
 - other?
- **What components can we provide to help RAs?**
 - SOS harvest
 - Metadata/WAF generation
 - other?