



## An overview of the OER Data Explorer Geoportal

<http://explore.noaa.gov/tinyurl/dataexplorer/>

One of the key objectives for managing NOAA’s exploration program data and information has been to present the user with a ‘holistic’ picture of all activities related to the expedition. Further, the scientific information needs to be broadly available to scientists and the public in a timely manner and the exploration results must be independently understandable. The multidisciplinary nature of the information collections and the distributed data management processes create unique management challenges.

The ESRI / open source geoportal technology is a useful tool to help achieve these objectives. The OER Data Explorer is a customized implementation of this software that is focused on helping the public discover and access OER data. Geoportal is sometimes referred to as an ‘integrative’ technology, because a single user query can return search results from distributed metadata repositories. Users can select which repositories to search.

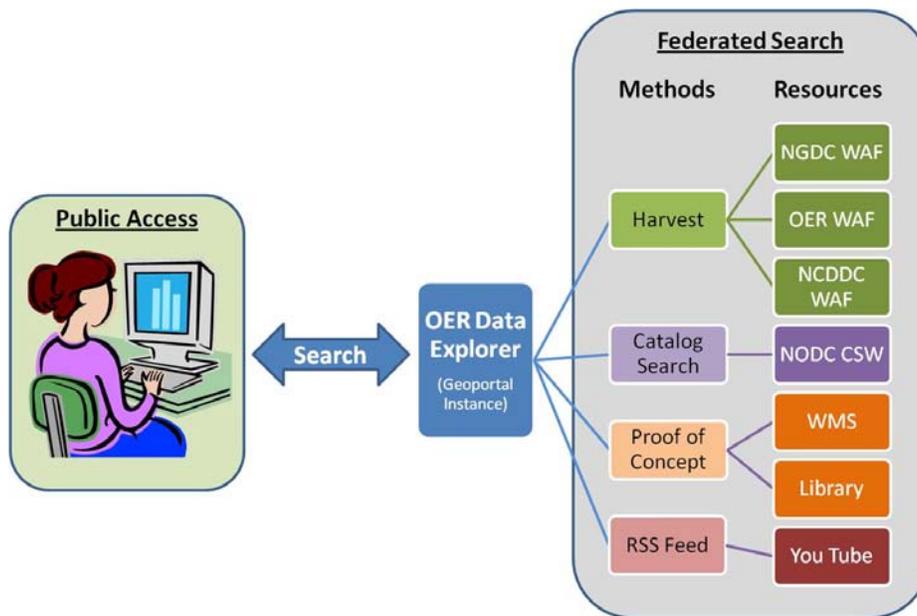


Figure 1 provides an overview of the system functions defined for the OER Data Explorer Phase I product beta release. Other information about the OER Data Explorer Geoportal instance:

1. The ESRI / open source geoportal software has been reconfigured (or customized) for various uses throughout NOAA. The OER instance of the geoportal integrates the customizations shared by others. Primary points are listed below:
  - ESRI / NOS: FGDC CSDGM metadata standards enforced for ingest and search
  - NGDC: ISO 19115-2 metadata standards developed for ingest and search

- NODC: temporal search criteria modified to search data collection dates
  - NCDDC: integrate ISO and FGDC search into a single, transparent user interface.
2. Several methods of accessing metadata records support user queries in this prototypical system. Each is further explained below:
- A. **Harvest method:** in this model, NCDDC harvests metadata records from Web Accessible Folders (WAFs) at distributed locations. The remote folders are synchronized with the OER geoportal instance daily to ensure the latest records are available. Harvests are filtered to meet OER record criteria, limiting the number of records exposed in the user search. In this example the following records are provided by the sources:
- NGDC WAF: FGDC multibeam records are harvested. Note that extensive, joint efforts are underway to harvest ISO records against standard keywords and other discovery fields
  - OER: WAF ISO cruise records are harvested
  - NCDDC GIS WAF: FGDC records created for geospatial data layers are harvested
- B. **Catalog Search method:** in this model, the NODC geoportal catalog is searched remotely by the OER geoportal user without harvesting any records. In other words, the user query is ‘passed through’ to the NODC catalog and results are displayed in the user’s browser while the records remain in place at NODC. The configuration setting between the NCDDC/OER geoportal and the NODC geoportal catalog are synchronized daily, but the records remain in the NODC catalog.
- NODC CSW: All NODC metadata records are available for user search, based on FGDC metadata records cataloged at NODC.
- C. **Proof of concept:** Several test records were developed for the OER geoportal to show the power of the geoportal integrative technology.
- World Ocean Atlas (WOA) Web Mapping Service (WMS): The WOA data are used to perform a quick QC for CTD data collections in the field through the Okeanos Atlas digital map. In this proof of concept the team created an ISO Services record to help the user discover and utilize the WOA ocean temperature service. This example shows the value of making data available as consumable services, the power of ISO to make this information routinely accessible and the integrative nature of the geoportal technology.
  - NOAA Library holdings: The NOAA Library is the repository for OER cruise documents, still images and video. In the current data management model, these holdings are documented using the MARC metadata standard and are discoverable by searching the Library’s NOAALINC (catalog). The MARC format and the Library catalog are not externally searchable by the geoportal. In this proof of concept, prototypical metadata records were created for Library holdings to demonstrate the ability to discover non-traditional information – that is, information that is important to understanding the context of the collection but that may not be geospatially displayed. The Library is moving toward holding these information collections in an institutional repository (IR)

documented that is planned to have an externally searchable catalog. Once these steps are in place, the NOAA IR holdings will be discoverable through a common search engine.

**D. RSS Feed**

- Ocean Exploration You Tube Channel: NOAA's education and outreach team posts exploration video highlights to this channel, but external metadata are not created nor cataloged for these video; thus these video are not searchable through an external metadata catalog. In this proof of concept, the OER geoportal searches the OE You Tube channel RSS feed. Videos may be searched against You Tube keyword tags. The Web Team and the Data Management team are jointly working to standardize the keyword tags for common elements.