The GEO Discovery and Access Broker

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GEO Discovery and Access Broker (DAB)

GEO DAB is a **brokering framework** that interconnects hundreds of heterogeneous and autonomous supply systems (the enterprise systems constituting the GEO metasystem) by providing mediation, harmonization and transformation capabilities.
Brokered Sources

Date 2016-06-14

More than 155 Brokered Systems

About 200 M granules
Implementing the brokering tier, GEO DAB dedicated to mediation of service interfaces and metadata models harmonization in a transparent way for both users and data providers.

The GEO DAB maps the diverse models onto its own internal model, which is general enough to comprise all the necessary concepts.

The key features of the GEO DAB internal data and metadata models are flexibility and extensibility allowing adding new concepts and related attributes.

OGC CSW 2.0.2 AP ISO 1.0
OGC CSW 2.0.2 ebRIM EO
OGC CSW 2.0.2 ebRIM CIM
ESRI GEOPORTAL 10
OAI-PMH 2.0
OpenSearch 1.1
OpenSearch 1.1 ESIP
OpenSearch GENESI DR
CKAN
CUAHSI HIS-Central
ESRI REST API 10.3
OGC WCS
OGC WMS
OGC WFS 1.0.0, 1.1.0, 2.0.0
OGC WMTS
OGC SOS 1.0.0, 2.0.0, 2.0.0 Hydro Profile
OGC WPS 1.0.0
OGC CSW 2.0.0 Core
OGC CSW 2.0.2 AP ISO 1.0
OGC CSW 2.0.2 ebRIM/EO AP
OGC CSW 2.0.2 ebRIM/CIM AP
IRIS Station
IRIS Event
HYRAX THREDDS SERVER 1.9
OAI-PMH 2.0 - Harvesting
GBIF
DIF
HYDRO
UNAVCO
CDI 1.04, 1.3, 1.4
ISO19115-2
THREDDS 1.0.1, 1.0.2
THREDDS-NCISO 1.0.1, 1.0.2
THREDDS-NCISO-PLUS 1.0.1, 1.0.2

- INPE
- CKAN
- DCAT
- Gi-cat
- NetCDF-CF 1.4
- FTP populated with supported metadata types
- WAF Web Accessible Folders
- GeoNetwork (2.2.0 or greater)
- Ecological Markup Language 2.1.1
- NERRS (National Estuarine Research Reserve System)
- HMA CSW 2.0.2 ebRIM/CIM
- HDF
- IADC DB (MySQL)
- GrADS-DS
- FedEO
- ARPA DB (based on Microsoft SQL)
- ESRI Map Server
- SHAPE files (FTP)
- KISTERS Web - Environment of Canada
- Environment Canada Hydrometric data (FTP)
- OpenSearch 1.1
- Earth Engine
- RASAQM
- EGASKRO
- SITAD (Sistema Informativo Territoriale Ambientale Diffuso)
- File System
- GDACS
- GeoRSS 2.0
- Degree catalog service 2.2
- OpenSearch GENESI DR
GEO DAB APIs

Different APIs for serving diverse Application development use cases (environments)

1. A set of standard **Web service interfaces**:
   - e.g. OGC service interfaces, CKAN, OAI-PMH, FTP, etc.

2. A set of APIs for software developers:
   - **Client side APIs**:
     - (high-level) JavaScript library
     - ... (Python)
   - **Server side APIs**:
     - REST/JSON APIs
     - OpenSearch APIs
     - ...

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The GEOSS Discovery and Access Broker APIs

GROUP ON EARTH OBSERVATIONS
GEO DAB View

- **Definition:**
  - Subset of the whole GEOSS resources defined by applying, via the DAB, a set of clauses
    - *Discovery clauses* (e.g. spatial envelope, keywords, sources, etc.)
    - *Access clauses* (e.g. data format, access protocol, CRS, etc.)
  - Defined “View” exposed on the GEOSS Portal

**Consumer-defined View** – i.e. Client-side These views are available only for the client application which defined the view.

**Provider-defined View** – i.e. Server-side These views are available for all client applications.
Thank you