Catalog Service for the Web, implementing interoperable services for discovering geoscience resources

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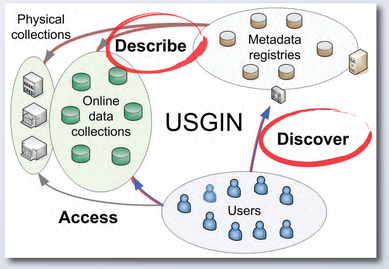
CSW in relation to USGIN Architecture



You are here!
More at http://lab.usgin.org

What is the Catalog Service for the Web?

It is an Open Geospatial Consortium standard: A technical standard and protocol for publishing, searching, and harvesting metadata about geospatial data, services, and related resources. on the Internet.

Content

Physical Collections

Digital Collections

Spatial Data Services

Content is **Described** by Metadata

Metadata is **Provided** through CSW Service

CSW Service is **Utilized** by Clients and Servers

Clients /Servers

Thin/Web Clients

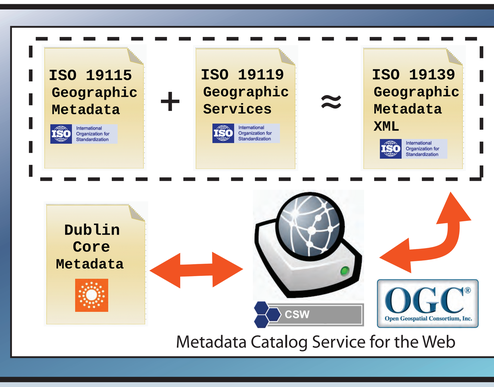
Thick/Desktop Clients

Web Portals

CSW Enabled Servers

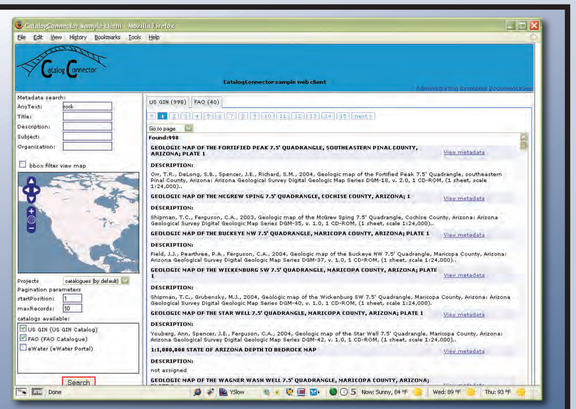
Why Provide Standardized Metadata?

Publicize and catalog your data, samples, and services: A standard metadata format makes it easier for everyone to discover your physical and electronic data, samples, and services.

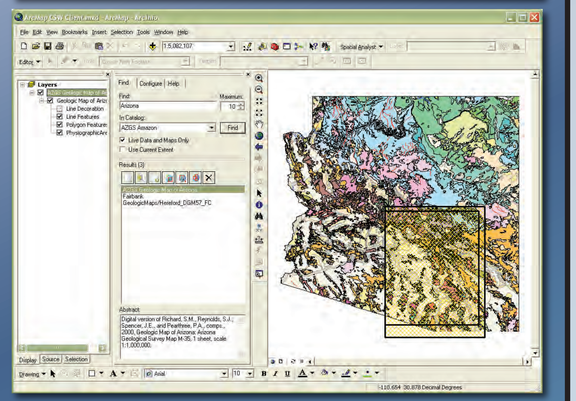


Metadata Catalog Service for the Web

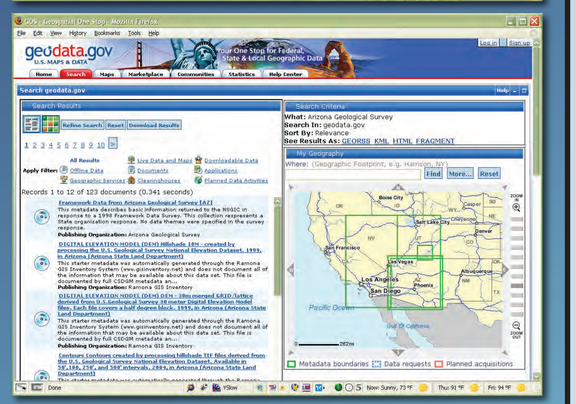
CatalogConnector:
IDEC's light-weight, open source Java web client which can search multiple CSW repositories at once. The web application acts as a proxy between a web browser and CSW services. Still in Beta at:
http://sourceforge.net/projects/catalogconnecto/



ArcGIS CSW Client:
ESRI offers the free "CS-W clients for ArcGIS" add-on for ArcMap which searches CSW services, displays metadata footprints, and allows one to add discovered WMS services to a map. The exciting add-on still requires more development and documentation.
http://www.esri.com/software/arcgis/geoportal/download.html



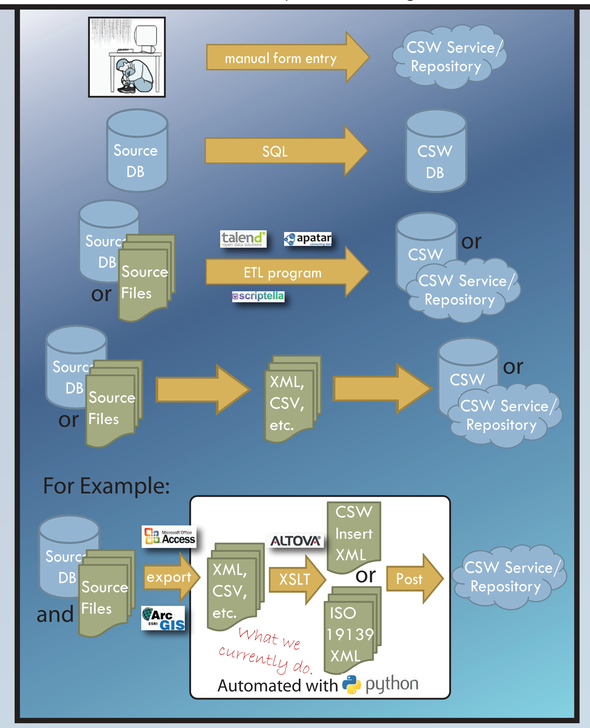
Geospatial One Stop (GOS):
The U.S. Government portal for geographic data also offers - among other - a CSW service for data discovery. The portal does not yet harvest metadata from other CSW services. The GOS service's API is available to registered users on the "My Tools" tab.
http://www.geodata.gov



GeoNetwork opensource:
This Java based, metadata repository and management web application suite is likely the most mature open source solution which supports ISO 19139 and CSW at this time. It offers harvesting from CSW and other metadata & OGC services, bulk metadata loading, a metadata editing & creation interface, metadata search & discovery capability, and offers a CSW service too.
http://geonetwork-opensource.org/

How to Generate Interoperable Metadata?

Metadata Extract Transform Load (ETL) workflow: There are many ways to ease or automate the considerable work of creating, loading, and maintaining metadata. Optimal solutions depend largely on number of records, number and type of metadata sources, available in-house expertise, and budget. There is no silver bullet.



CSW & Metadata Standards, Profiles, Specs, ...

A brief overview of CSW and geospatial metadata : The OGC CSW 2.0.2. (Catalog Service) implementation specification is agnostic regarding to metadata standards and only requires a minimum Dublin Core (DC) metadata response to be returned.

- The OGC CSW APISO 1.0.0 (Metadata Application Profile) specification for ISO 19139 metadata is widely adopted by organizations and software developers. It is the basis for other profiles.
  http://www.opengeospatial.org/standards/cat
- The North American Profile (NAP ISO) for ISO 19115 metadata is new and not much adopted yet.
  http://www.fgdc.gov/standards/projects/incits-l1-standards-projects/NAP-Metadata
- Domain Profiles Related to CSW and CSW APISO:
  - Energistics is developing a profile for the energy industry
    http://www.energistics.org/
  - INSPIRE is developing a profile for the European Union
    http://inspire.jrc.ec.europa.eu/
  - USGIN is developing a profile for the U.S. geoscience community
    http://usgin.org
  - ANZLIC has developed a profile for Australia and New Zealand
    http://www.anzlic.org.au/
  - AODC has developed a profile for oceanography
    http:// /

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