Geospatial Commons Workgroup

A subgroup of the MetroGIS Technical Leadership Workgroup & MnGeo Standards Committee

Agenda Thursday, April 29, 2010 9:30 to 11:30 a.m.

Centennial Office Building, Nokomis Conference Room; 3rd Floor 658 Cedar Street, St. Paul, MN 55155

- 1. Introductions
- 2. Review agenda
- 3. Overview of the Workgroup's mission and the prototype GeoPortal implementation strategy
- 4. Overview of ESRI's ArcGIS Server Geoportal Extension
- 5. Discussion of implementation hurdles/question in scoping the test GeoPortal implementation
 - Recap of concerns from Mn/DOT's implementation
 - Desired functions of the Commons (list)
 - Where should we expect to find functionality in ESRI's GeoPortal Extension?
 - Where should we not?
 - What is new in version 10 of the GeoPortal Extension?
- 6. Further discussion
- 7. Action Items
- 8. Adjourn

Geospatial Commons/Portal Functions

Draft 04/15/2010

- Broker involves many types of geospatial resources including data, web services, applications, feeds, etc.
- Broker should support a **federation of smaller "nodes"** via harvesting or linking on the fly.

Highest priority = bold

Medium priority = not bold Low priority = gray

Search (find)

- Structured search interface
 - Spatial search (e.g. area of interest bounding box)
 - Metadata search
- Google metadata search
- Catalog (viewable page)
- Registry (database)
- Cross-selling (recommendations)
- Search spatial features/attributes

Inform & Collaborate

- Feeds (RSS, Twitter)
- News/discussion forum
- Wiki
- Shared development space
- Standards & cookbooks
- Thesauri & gazetteers

Discovery (evaluate)

- Metadata and documentation viewer
- Map viewer
- Link to content provider
- Connect user to web service
- Download data and other resources
- User Reviews (quality, trustworthiness, etc.)

Administration

- Catalog maintenance
- Harvesting
- Security & User management
- Hardware/network support
- User profiles (producers)
- User profiles (consumers)
- Registry of web service users
- Back-end database
- Web Service Approval & trustworthiness
- Web Service Monitoring
- Metrics of usage
- Governance
- Support/training on providing services, SLAs, etc. to producer
- Support and training to end users

Geospatial Commons Functions - Additional Detail

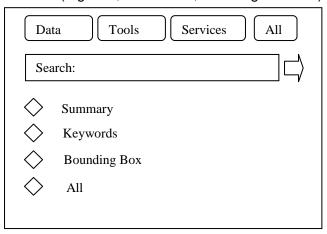
Source: Geospatial Commons Functional Review Exercise Cialek, Kotz, Loesch, Watson, Weinberger

April 15, 2010

Note: It has not been determined that the Commons will have direct access to the datasets listed on the Commons. If it does, that facilitates a map viewer, clip and ship downloads and perhaps some other functions. The workgroup will have to evaluate the value of this vs. the costs.

Structured Search

- Similar to existing GeoGateway search in many ways
- Keywords (theme, place, whole metadata, etc.)
- Bounding box
 - box draw
 - enter coordinates
 - o pick geography from list
- Define the tool to be able to "check-off" certain fields
- Should support "and" as well as "or" in the search phrase
- Search for a) data b) tools c) services d) discussions/community
- Filters (by publisher, thematic category, etc.)
- Provides a list of results (e.g. title, short blurb, click to get details)
- Example



Google Metadata Search

 What do we need to do to have our metadata records get indexed and be searchable by Google?

Catalog (Viewable Page)

- This is a web page listing available data sets that can be visually browsed by the user
- List by thematic category
- Can refine the catalog a bit (e.g. just data, just services, just apps... other refinements?)
- Access by identity and role for restricted access datasets lower priority for now
- Tier 1 (data available directly through the system)
- Tier 2 (data must be requested from publisher/contact)

Registry

- We started calling this the "Registry Database"
- This is a database that feeds the "Viewable Catalog" (see #3) as well as the structured search interface and probably many other functions of the Commons.

Metadata and Documentation Viewer

- A web based viewer (e.g. HTML) that can display the metadata for a given resource (data, tool, service, other)
- Must be able to accommodate application documentation as well as data documentation
- May include a link to binary files stored in the system (database?) such as a .pdf

Map Viewer

- A function to create an interactive map.
- Obviously this only works if the data are available, thus if the Commons doesn't have direct access to all of the data, then maybe it only shows data available as a web service.

Link to Content Provider

- Metadata links and/or Registry query

Connect User to Web Service

- User: drags and drops a connection object into client GIS and data is displayed
- Developer: gets an API to the data so she can build an application

Download Data and Other Resources

- Click to download
- If Commons has direct access to data not necessarily the case
 - Clip and ship
 - Subset by list of geography
 - Select tiles by bounding box

Registry Maintenance

- Application that will allow the Registry Database to be maintained.
- Administrative tools and a person to use them
- Records retention must be addressed
- Ticklers via email prompt when stale information will be removed.

Harvesting

- Tools for harvesting metadata records into the Commons from authorized organizations
- Standards for participants
- Validation tools

Hardware and Network Support

- will be needed

User Profiles (Producers)

- this refers to resource contributors
- these people need to be "registered" and maintain a profile on the system.
- may include roles

End User Profiles (Consumers)

- In addition to anonymous consumers, some users may "register" and by doing so gain additional functionality from the system, i.e. access to restricted data, ability to contribute quality ratings, etc.

Registry of Web Service Users

- Used to track what clients are dependent on what services, who should be notified if a service goes down or changes its parameters.
- Linked to technologies that monitor services

Back End Database

- Need to pick a database. Is there a benefit to having it vendor neutral (open source)
- Design the database (look at DNR examples)
- Include the "Registry" (see #4 and #19 above)
- Include Producer and End User Profiles
- Include statistics and metrics

Web Service Approval and Trustworthiness

- This is an administrative / governance topic that comes later
- "What does the service provider agree to do?"

Support / Training on Providing services, SLAs, etc. to Producers

These governance issues relate to SLAs