

# **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; 3<sup>rd</sup> 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

<p><b><u>Search (find)</u></b></p> <ul style="list-style-type: none"> <li>– <b>Structured search interface</b> <ul style="list-style-type: none"> <li>– <b>Spatial search (e.g. area of interest bounding box)</b></li> <li>– <b>Metadata search</b></li> </ul> </li> <li>– <b>Google metadata search</b></li> <li>– <b>Catalog (viewable page)</b></li> <li>– <b>Registry (database)</b></li> <li>– Cross-selling (recommendations)</li> <li>– Search spatial features/attributes</li> </ul>	<p><b><u>Inform &amp; Collaborate</u></b></p> <ul style="list-style-type: none"> <li>– Feeds (RSS, Twitter)</li> <li>– News/discussion forum</li> <li>– Wiki</li> <li>– Shared development space</li> <li>– Standards &amp; cookbooks</li> <li>– Thesauri &amp; gazetteers</li> </ul>
<p><b><u>Discovery (evaluate)</u></b></p> <ul style="list-style-type: none"> <li>– <b>Metadata and documentation viewer</b></li> <li>– Map viewer</li> <li>– <b>Link to content provider</b></li> <li>– <b>Connect user to web service</b></li> <li>– <b>Download data and other resources</b></li> <li>– User Reviews (quality, trustworthiness, etc.)</li> </ul>	<p><b><u>Administration</u></b></p> <ul style="list-style-type: none"> <li>– <b>Catalog maintenance</b></li> <li>– <b>Harvesting</b></li> <li>– Security &amp; User management</li> <li>– <b>Hardware/network support</b></li> <li>– <b>User profiles (producers)</b></li> <li>– User profiles (consumers)</li> <li>– Registry of web service users</li> <li>– <b>Back-end database</b></li> <li>– Web Service Approval &amp; trustworthiness</li> <li>– Web Service Monitoring</li> <li>– Metrics of usage</li> <li>– <b>Governance</b></li> <li>– <b>Support/training on providing services, SLAs, etc. to producer</b></li> <li>– Support and training to end users</li> </ul>

## Geospatial Commons Functions - Additional Detail

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Source: Geospatial Commons Functional Review Exercise  
Cialek, Kotz, Loesch, Watson, Weinberger  
April 15, 2010

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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
  - o box draw
  - o 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

The diagram illustrates a search interface with the following components:

- Four filter buttons: "Data", "Tools", "Services", and "All".
- A search input field labeled "Search:" with a right-pointing arrow button.
- A list of four filter options, each preceded by a diamond-shaped checkbox:
  - Summary
  - Keywords
  - Bounding Box
  - All

### 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
  - o Clip and ship
  - o Subset by list of geography
  - o 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