

Esri Geoportal Server

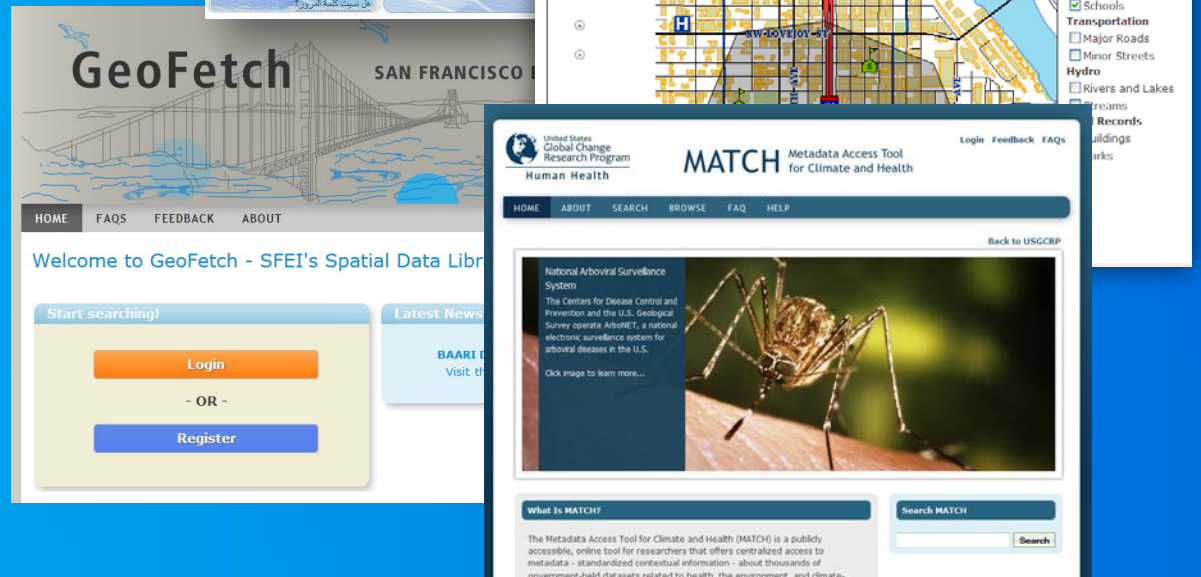
Implementing a Spatial Data Infrastructure

@martenhogeweg

Esri Geoportal Server

Extending ArcGIS to enable discovery and use of geospatial resources in heterogeneous environments

- Search and view geospatial resources
- Manage, publish, and store metadata
- View live map services
- Download data
- In Business since 2003
- Open Source since 2010
- Standards-compliant
- OGC CSW Reference Implementation



Use Case: “I want to find data ...”

Solution:

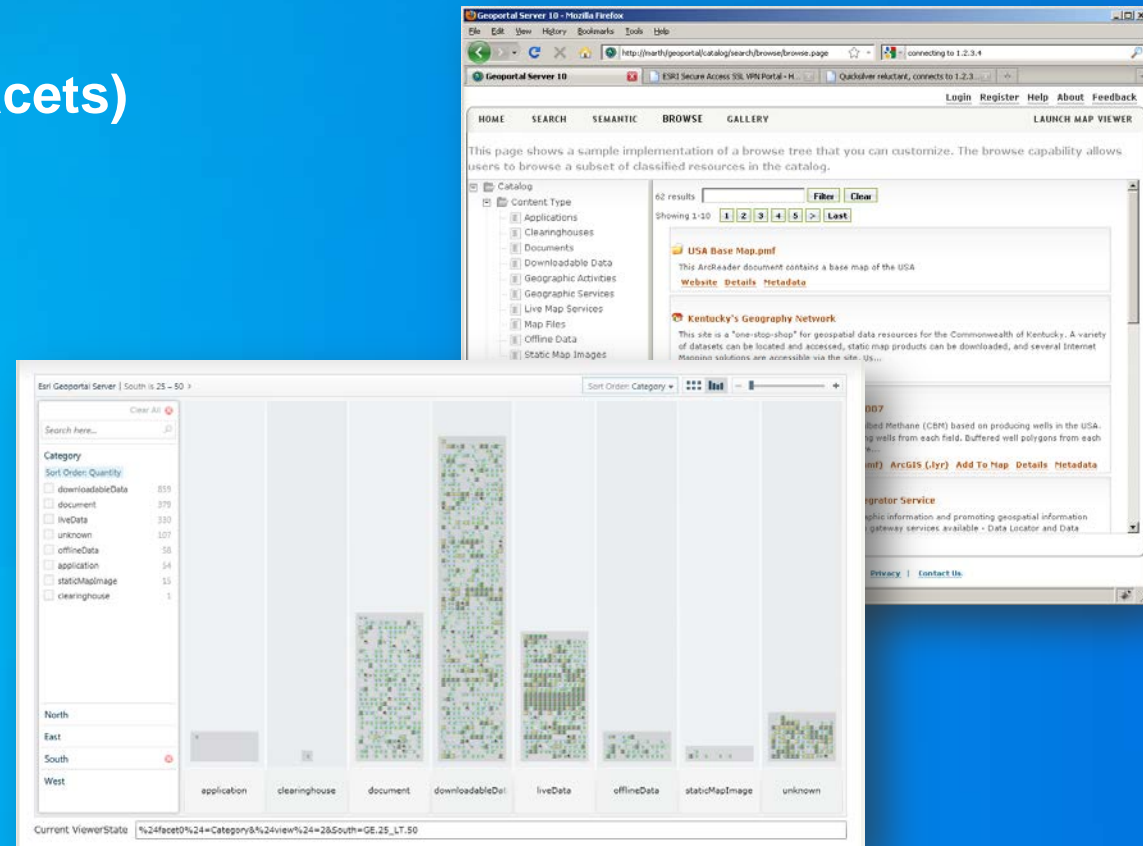
- Simple keyword Search
- Spatial search
- Federated Search
- Advanced options for experts
- Smart matching and ranking
- Thesaurus Service
- Search results are simple to understand... yet contain detail for power users

The image displays a screenshot of the ArcGIS search interface. The main search bar contains the keyword 'wind'. Below the search bar, there are options for 'WHERE' (Anywhere, Intersecting, Fully within) and a map showing search results on a world map. The search results list includes 'QuickScat Wind Speed', 'Global Surface Meteorology Monitoring System (SURF_MET_WIND)', and 'NCEP Forecast'. A dropdown menu titled '> Additional Options' is open, showing a list of content types: Any, Live Map Services, Downloadable data, Offline Data, Static Map Images, Documents, Applications, Geographic services, Clearing Houses, Map Files, Geographic Activities, and UnKnown. Another search bar below shows the keyword 'hurricanes' and a list of sites where the search will be distributed, including 'This Site', 'ArcGIS.com', 'ArcGIS Portal', 'USGS Science Base', 'YouTube', 'National Snow and Ice Data Center', 'AidData', and 'World Bank Projects'.

Use Case: “I don’t want to search though...”

Solution:

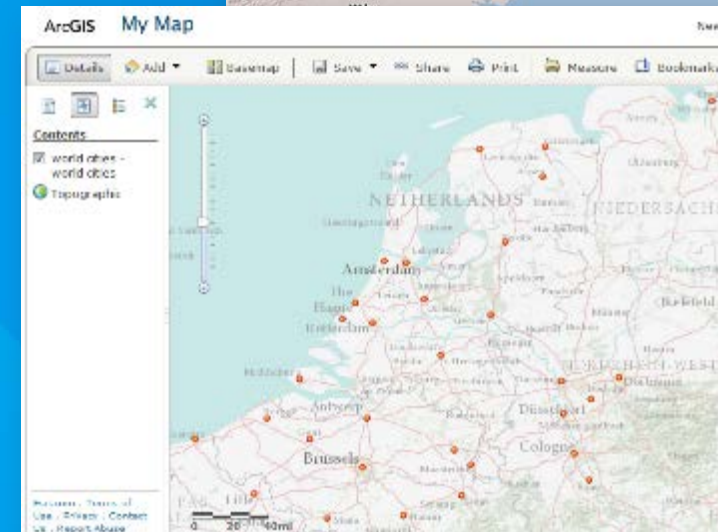
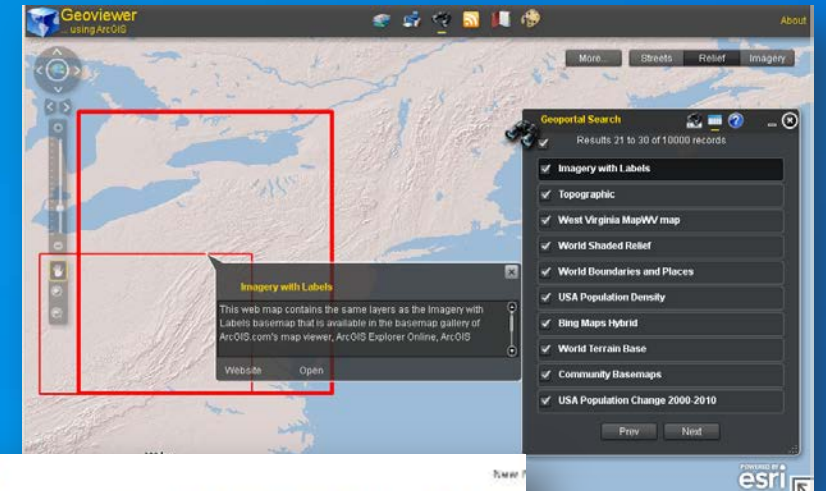
- Analogous to Department Store
- Implementer Organizes Hierarchy (Facets)
- Based on Metadata Content
- Filter/Paginate Within Category
- Classification and Relationships



Use Case: “I want to make a map ...”

Solution:

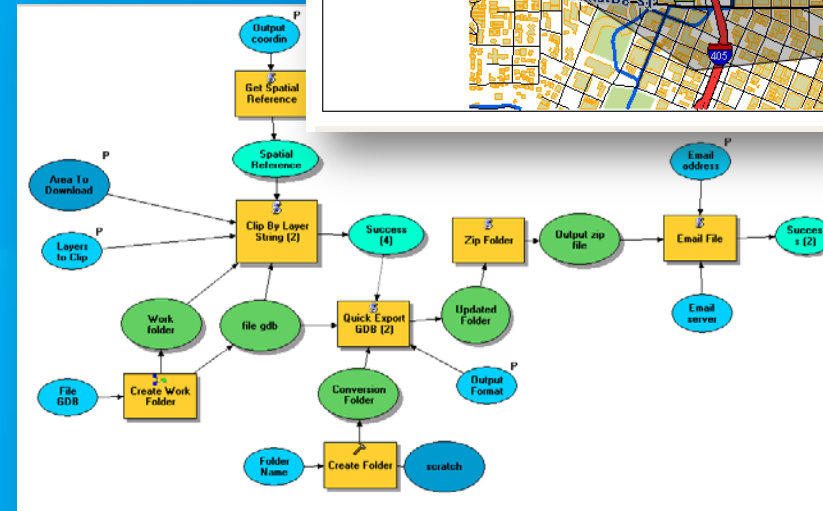
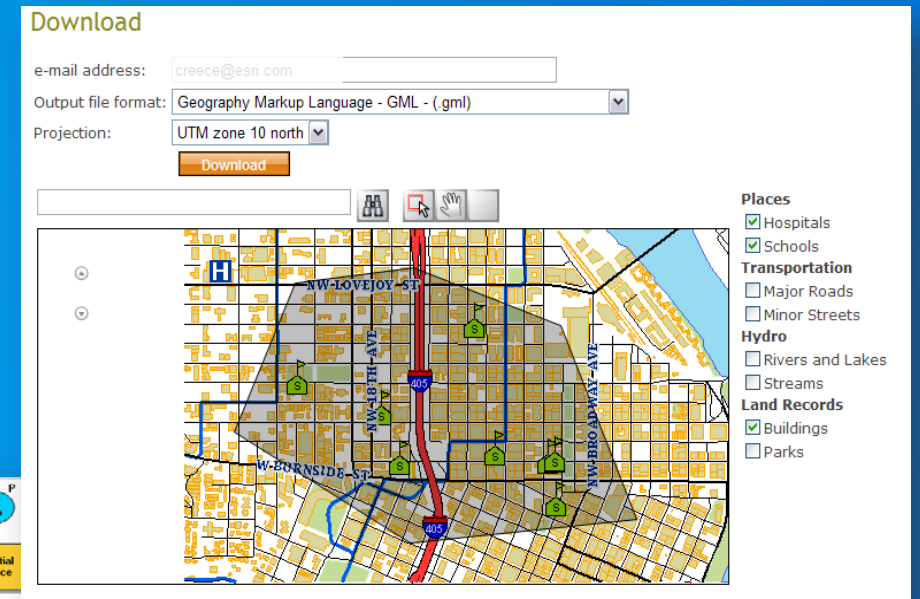
- Preview services:
 - ArcGIS Server Map Services
 - OGC WMS, SOS
 - GeoRSS
 - KML
- Provide integration points for map viewer platforms
 - Web AppBuilder
 - ArcGIS.com Viewer
 - JavaScript, Flex, Silverlight
 - ArcGIS Desktop ArcMap
 - ArcGIS Explorer



Use Case: “I want to download data ...”

Solution:

- Based on Clip-Zip-Ship Service
 - Select area
 - Select data
 - Set options
- Deliver download link through email
- Extensible in Python



Use Case: “I want to share my resource...”

Solution:

- Register Servers or Services Directly
- Create metadata online
- Upload metadata
- Register catalog service for harvesting
- Support metadata standards:
 - INSPIRE
 - North American Profile
 - Dublin Core
 - Configurable

The image displays three overlapping screenshots of a web application interface for metadata management.

Register New Item: This form allows users to register a new item. It includes a dropdown for "On behalf of:" (set to "mhogeweg") and a "Level of Detail" section with radio buttons for "Simple Item Descriptive", "Detailed Item Descriptive", "ISO 19139/19119 Web", "ISO 19139/19115 Data", "North American Profile", "INSPIRE Profile to ISO", and "IEEE Standards Register". A "Proceed" button is at the bottom.

Create Repository: This form is used to create a new repository. It includes fields for "ID:" and "Repository UUID:", both with the note "Value will be generated upon saving.". It has a "Protocol Type:" section with radio buttons for "ESRI MS", "Z39.50", "OAI", "WAF", and "CSW" (selected). There are "Name:" and "Host Url:" input fields, a "Test" button, and a "Profile:" dropdown menu. The dropdown menu is open, showing a list of metadata standards including "ArcIMS 9.3 CSW 2.0.2 OGCCORE", "Compusult WES CSW 2.0.1 OGCCORE", "ArcGIS Online", "terra catalog CSW 2.0.2 AP ISO", "terra catalog CSW 2.0.0 AP ISO", "EXCAT CSW 2.0.2 OGCCORE", "SRU CSW 2.0.2 Gateway to Z39.50", "IONIC CSW 2.0.0 ebRIM", "ArcIMS 9.2 CSW 2.0.1 ebRIM", "NASA CSW 2.0.2 AP ISO", "Compusult WES9 CSW 2.0.0 OGCCORE", "INSPIRE CSW 2.0.2 AP ISO", "CSW 2.0.2 AP ISO", "Compusult WES CSW 2.0.1 ebRIM", "OGCCORE", "OGCCORE", "log", "OGCCORE", "OGCCORE", "M".

Upload Metadata: This form is used to upload metadata files. It includes a "Please use the Browse button to select the metadata file from the catalog." instruction, a note "ISO metadata standard and in Extensible Markup Language (XML)", and a "Local path:" input field with a "Browse..." button. It also has "On behalf of:" (set to "mhogeweg") and radio buttons for "Browse for a local file" (selected) and "Specify a network path". "Upload" and "Validate" buttons are at the bottom.

Use Case: “Is new data is available...?”

Solution:

- User specifies search criteria
- Give user link to a GeoRSS feed
- User subscribes to GeoRSS feed
- Bookmark searches in the browser

See results through REST API: [GEORSS](#) [ATOM](#) [HTML](#) [FRAGMENT](#) [KML](#)

GIS Portal GeoRSS.
You are viewing a feed that contains frequently updated content. When you subscribe to a feed, it is added to the Common Feed List. Updated information from the feed is automatically downloaded to your computer and can be viewed in Internet Explorer and other programs. [Learn more about feeds.](#)

Subscribe to this feed

Displaying 3 / 3

All 3

Internet Explorer

Subscribe to this Feed
When you subscribe to a feed, it is automatically added to the Favorites Center and kept up to date.

Name: My Custom Search GeoRSS.

Create in: Feeds [New folder]

[Subscribe] [Cancel]

Your computer will periodically check online for updates to subscribed feeds, even when Internet Explorer is not running. [What's a feed?](#)

Edit This Bookmark

Remove Bookmark

Name: hurricanes

Folder: Geoportal Sandbox

Bookmarks Toolbar

- Geoportal Server
- ArcGIS Servers
- ArcGIS Portals
- Searches
- localhost

Done Cancel

Use Case: “Is my resource is available...?”

Solution:

- Monitor Services
- Verify Implementation

- Performance and Scalability:

<http://resources.esri.com/enterpriseGIS/index.cfm?fa=performance.main>

- FGDC Service Status Checker:

<http://registry.fgdc.gov/statuschecker/>

The screenshot displays the FGDC Service Status Checker interface. At the top, there's a navigation bar with links: Open, Preview, Add To Map, Details, Metadata, Zoom To, Share, and Test (circled in red). Below this, a browser window shows the URL: <http://registry.fgdc.gov/statuschecker/services/rest/index.php?url=http%3A%2F%2Fsrss-mapserv...>. The main content area is titled "Service Status Checker" and shows a "Service Analysis Report for 2009-07-09 2:20:09".

Service Information
The following service information was tested.
Service Type: wms
Service URL: <http://srss-mapserv.dli.wa.gov.au/firewatch.asp?Service=W>

Service Report Card
Valid URL: getMap Status: getMap Score (0-100): 99.45%

Registration Validation
The following test determines if the service URL is valid or invalid.
Registered Service: <http://srss-mapserv.dli.wa.gov.au/firewatch.asp?Service=WMS&Request=G>
This is a valid URL.

Test Results
The getMap is the main operation tested and scored.

Test	Status	Response	Score (0 - 100)
getMap		0.70	99.45

The following table summarizes the full suite of tests performed on this service:

Test	Status	URL	Error
httpServer		http://srss-mapserv.dli.wa.gov.au	-
getCapabilities		http://srss-mapserv.dli.wa.gov.au/firewatch.asp?Service=WMS&Request=GetCapabilities	-
getMap		http://srss-mapserv.dli.wa.gov.au/firewatch.asp?Version=1.1.1&Request=GetMap&Service=WMS&Request=GetMap&SRS=EPSG:44148&Layers=2005_FireScars&Height=250&Width=250&Style=	-



DEMO

Geoportal Server 1.2.6

Welcome to My World

INSPIRE
THREDDS
GEOSS
ArcGIS Online
ATOM
CS-W
Geoplatform.gov

ISO
OGC
W3C
SPARQL



Measurements

Documents

CGDI
GEMINI

FGDC

ANSI
NEN

ANZLIC

Features

Images

ebRIM

OpenSearch

DCAT

Portal for ArcGIS

Wait...
That Sounds Old School



Aren't Geoportals Obsolete?



NO

and here is why

**GEOPORTAL
IS AWESOME!**



The Universe



~~Everything~~

The other Universe



~~Everything, the sequel~~

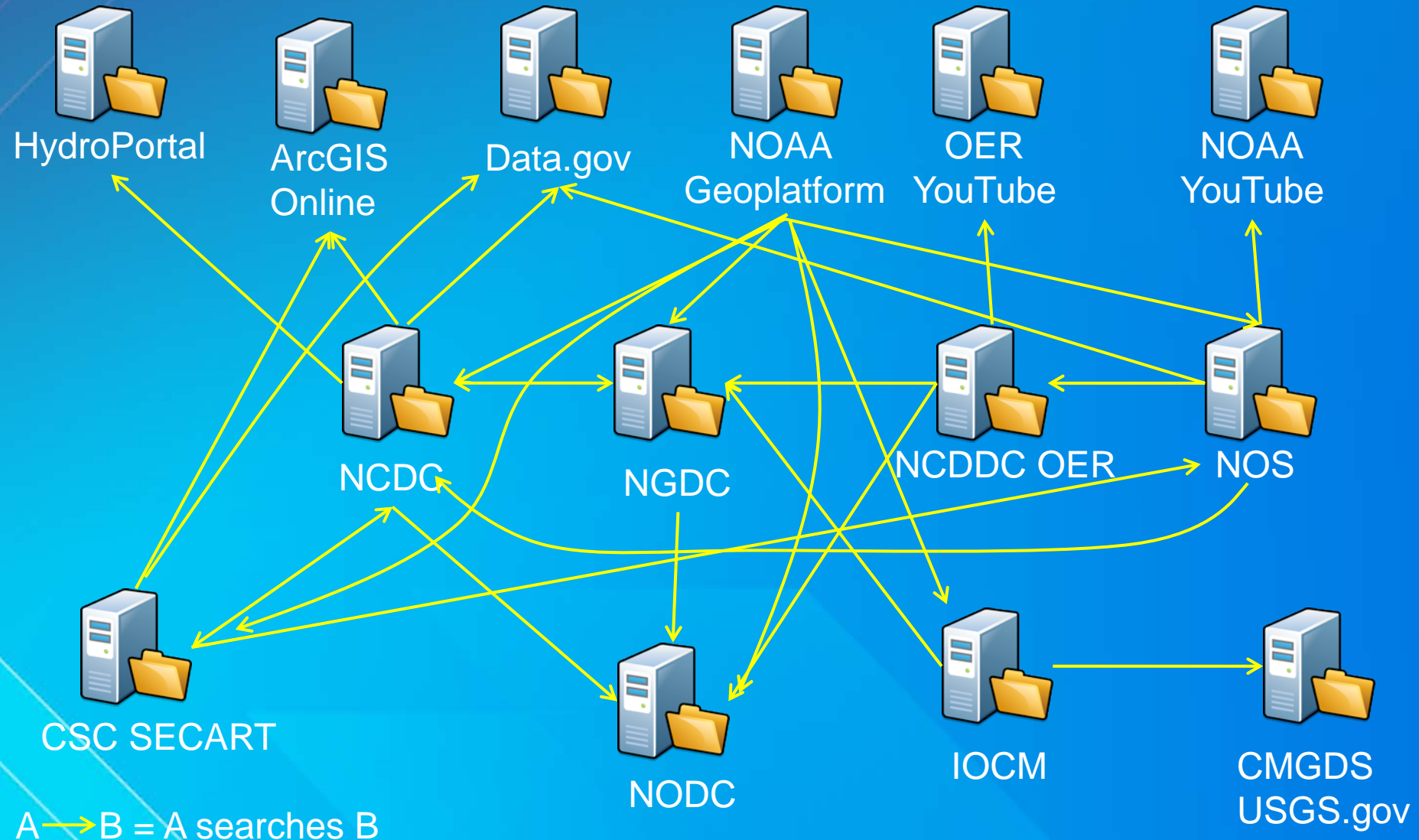
Everything

Group on Earth Observations

Systems of Systems



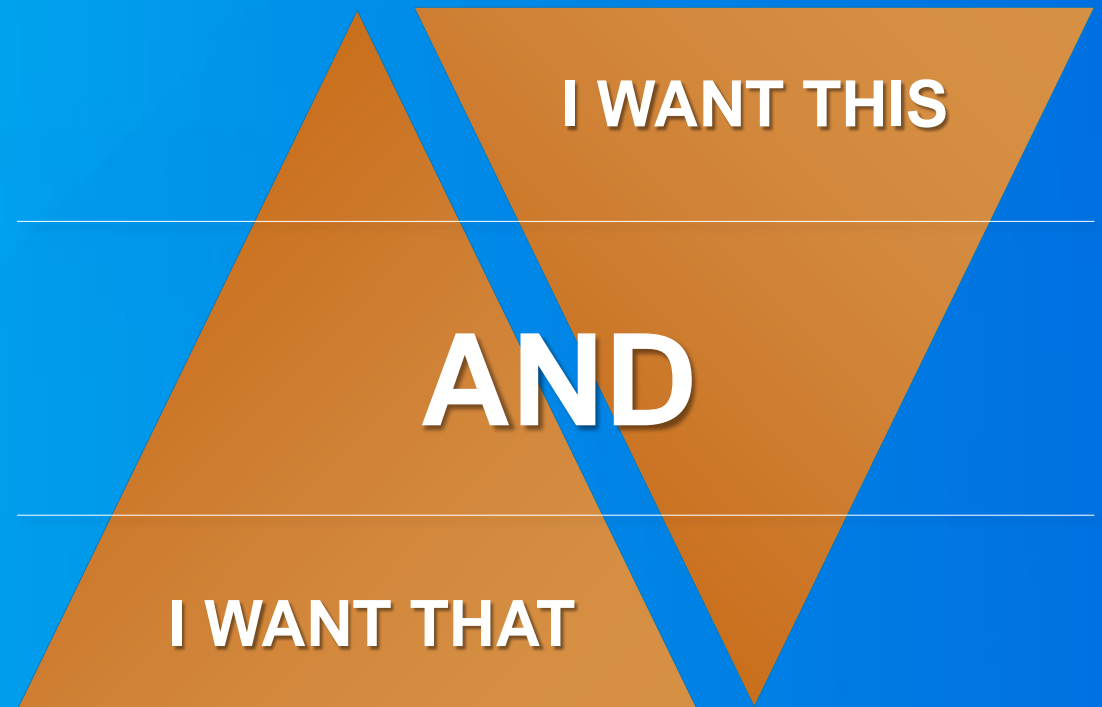
Your Organization is a System of Systems...



&

The Power of AND

- Minimalistic user experience **AND** rich functionality
- Simple descriptions **AND** complete metadata
- Work with our content **AND** everyone else's
- Great taste **AND** 0 calories
- Outsource everything **AND** do it myself
- Publish once **AND** share everywhere



Geoportal Server AND ArcGIS Portal

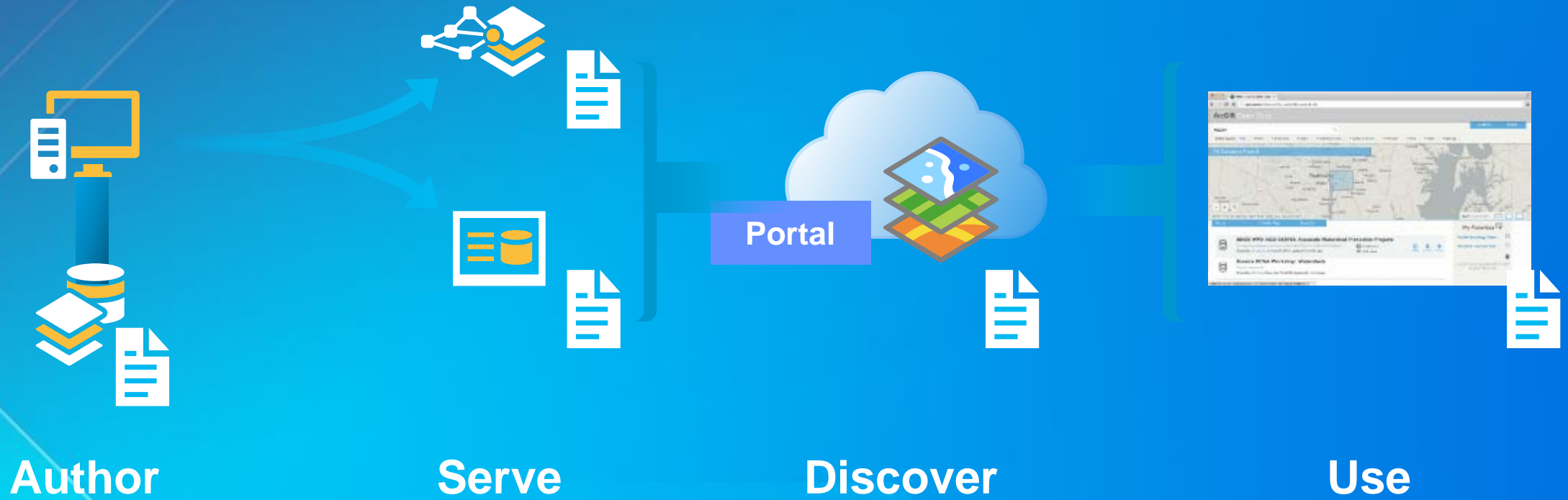
- Search ArcGIS Portals from Geoportals
- Search Geoportals from ArcGIS Portals
- Synchronize between portals
- OGC CS-W Interface to ArcGIS Portal
- Standards-based Metadata Editor
 - ArcGIS Portal items
 - ArcGIS Server services

The Road Ahead

- CSW 3.0 Support
- Enhance DCAT support (Data.gov, EU Application Profile)
- Web AppBuilder Search Widget
- Harvesting into ArcGIS Online subscriptions
- CSW interface to ArcGIS Online and Portal for ArcGIS
- ISO 19115-3

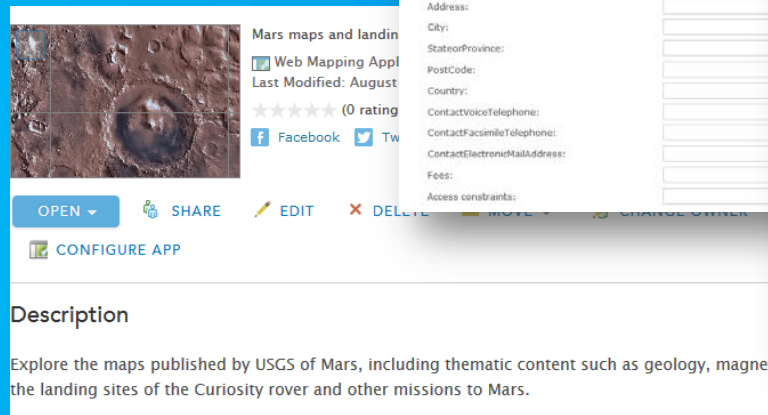


Metadata in ArcGIS



Metadata for ArcGIS Online Items

- Datasets
- Geoprocessing tools and toolboxes
- Map documents
- Web Services (ArcGIS, OGC)
- Webmaps
- Apps
- ...



Mars maps and landing sites
Web Mapping App
Last Modified: August 2015
0 rating

Description
Explore the maps published by USGS of Mars, including thematic content such as geology, magnetic, and gravity. And of course also included the landing sites of the Curiosity rover and other missions to Mars.

URL: <https://hogeweg.esri.com/arcgis/services/SampleWorldCities/MapServer/WMSServer>

Properties

Enter service properties below Use external capabilities files

Name: WMS
Title: world cities (WMS)
Abstract: fedgc
Keywords: demo
Online resource: <http://hogeweg.esri.com>
Contact Person: MH
Contact Position:
Contact Organization:
Address type:
Address:
City:
State or Province:
Post Code:
Country:
Contact Voice Telephone:
Contact Facsimile Telephone:
Contact Electronic Mail Address:
Fees:
Access constraints:

Item Description - Model 1

Save X Exit

Overview

- Item Description
- Topics & Keywords
- Citation
- Citation Contacts
- Contacts Manager
- Locales
- Metadata
- Details
- Contacts
- Maintenance
- Constraints
- Resource
- Details
- Extents
- Points of Contact
- Maintenance

Metadata Contacts

Contact: Marten Hogeweg (Publisher)

Name: Marten Hogeweg
Organization: Esri
Position:
Role: Publisher

Contact Information

Email: mhogeweg@esri.com
+ New Online Resource

Address Type: Both
Address: 380 New York Street
City: Redlands
State: CA

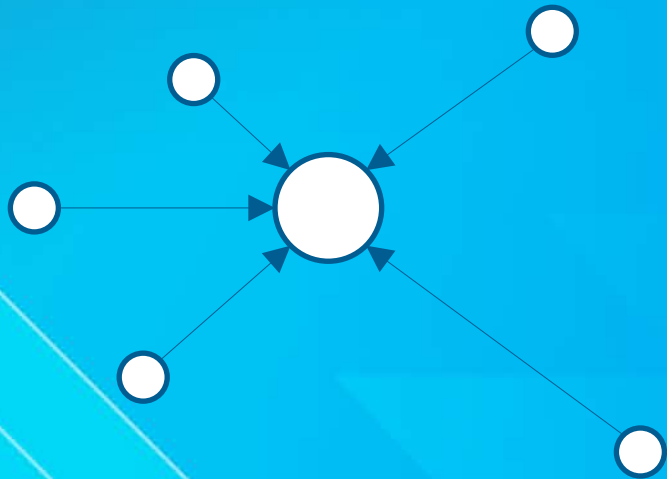
Manage Add User Create Metadata

To create a new metadata record, select the Metadata Standard from the dropdown menu. After clicking 'proceed', a custom form is displayed for you to complete.

- On behalf of: mhogeweg
- Metadata standard:
- FGDC
 - Dublin Core
 - StratML, Part 1, Strategic Plans
 - StratML, Part 2, Strategic Plans or Performance
 - NLMODGMP - DHyd
 - ISO 19115 (Data)
 - ISO 19119 (Services)
 - ISO 19115-2
 - ISO 19110 (Feature Catalogue)
 - National System for Geospatial Intelligence Metadata
 - NATO Geospatial Metadata Profile (data)

Harvesting into ArcGIS Online Subscriptions

- ✓ ArcGIS Server content
- ✓ Portal for ArcGIS content – federated portals
- Any Other Source Catalog



Register Resource

ID: Value will be generated upon saving.
Resource UUID: Value will be generated upon saving.

Protocol Type: URL ArcGIS Esri MS OAI WAF CSW THREDDS

Title:

Source ArcGIS Server

REST URL:
Example: <http://server.arcgisonline.com/arcgis/rest/services>

SOAP URL:
Example: <http://services.arcgisonline.com/arcgis/services/?vswdl>

Destination Portal

Host:
Example: my.host.com/portal

User Name:

Password:

Owner:

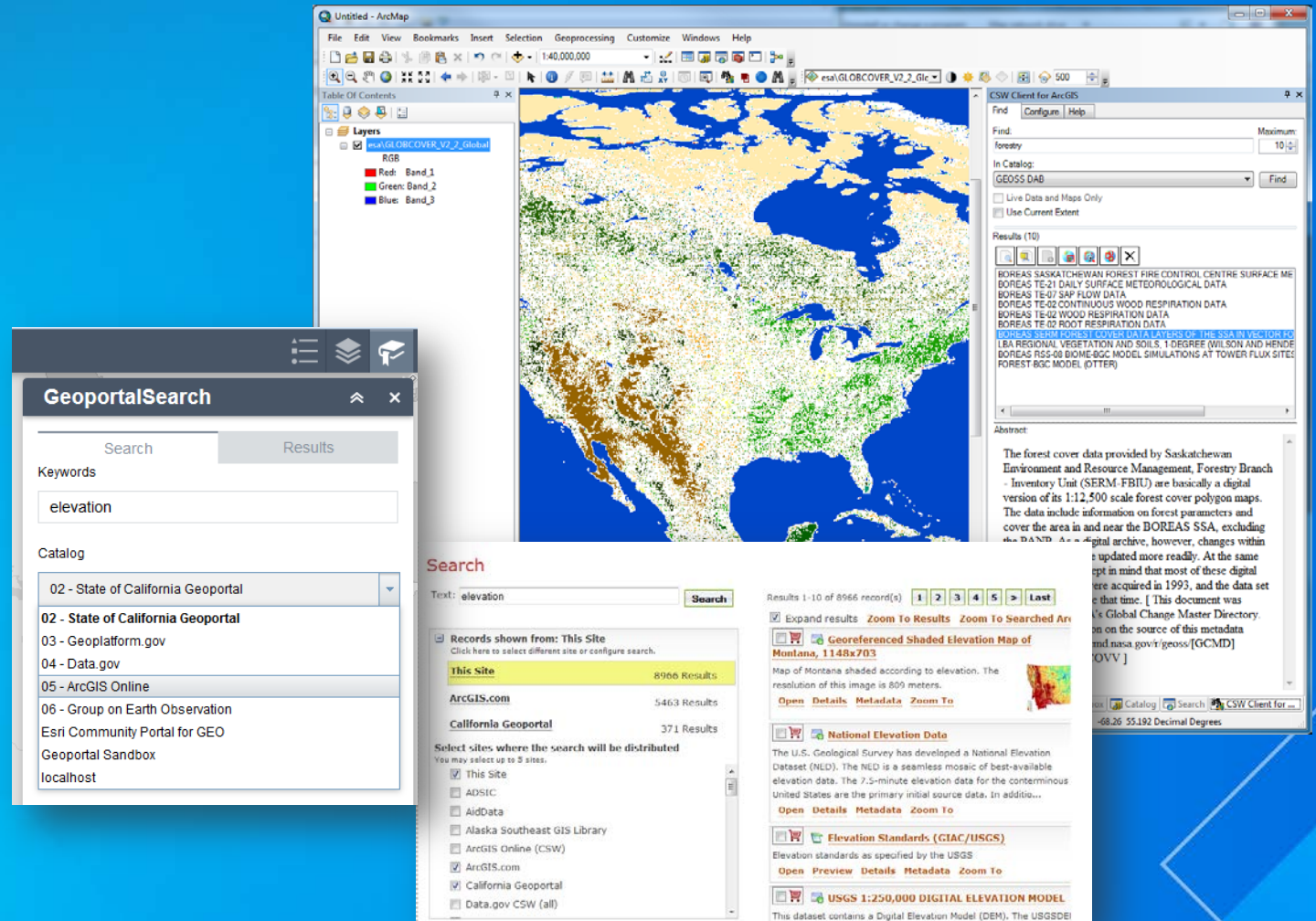
Folder ID:

Federated Search Clients

Enable discovery across ArcGIS platform

- Portal for ArcGIS
- Geoportal Server
- ArcMap
- Web AppBuilder
- Flex/Silverlight

- OGC CSW
- OpenSearch
- XML/JSON



CSW interface to ArcGIS Online and Portal for ArcGIS

- Expose ArcGIS Online and Portal for ArcGIS through OGC CSW
- Following Simple Façade Pattern

- All ArcGIS Online Public Content

- <http://hogeweg.esri.com/csw?request=GetCapabilities&service=CSW&version=2.0.2>

- All Geoplatform.gov Public Content

- <https://hogeweg.esri.com/csw/IG1N168rz0la3DMx?request=GetCapabilities&service=CSW&version=2.0.2>

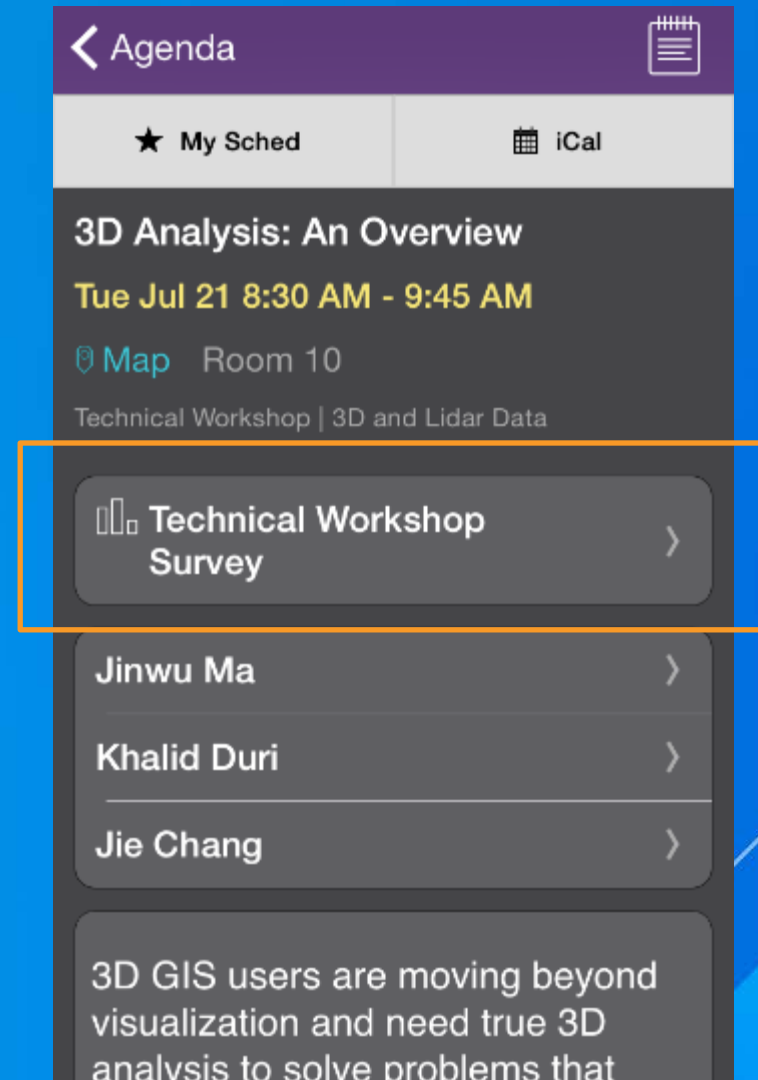

Organization ID

Here be dragons!



Thank you...

- **Get the Event App:**
 - iOS: <http://www.esri.com/events/eventsapp/apple-app>
 - Android: <http://www.esri.com/events/eventsapp/android-app>
- **Please fill out the session survey in your mobile app**
- **Select [Geoportal] in the Mobile App**
 - Use the Search Feature to quickly find this session
- **Click “Technical Workshop Survey”**
- **Answer a few short questions and enter any comments**



Where To Go From Here?

- **Open Data SIG** **Room 31C** **5:30PM** **Tuesday**
- **SDI SIG** **Room 23A** **12:00PM** **Wednesday**
- **Metadata SIG** **Room 12** **5:30PM** **Wednesday**

- **The US National Spatial Data Infrastructure Strategic Plan: Vision and Progress to Date**
 Room 28E **1:30PM** **Wednesday**
- **The National Geospatial Platform: What's New and What's Coming Soon**
 Room 28E **3:15PM** **Wednesday**

Thank You



Understanding our world.