

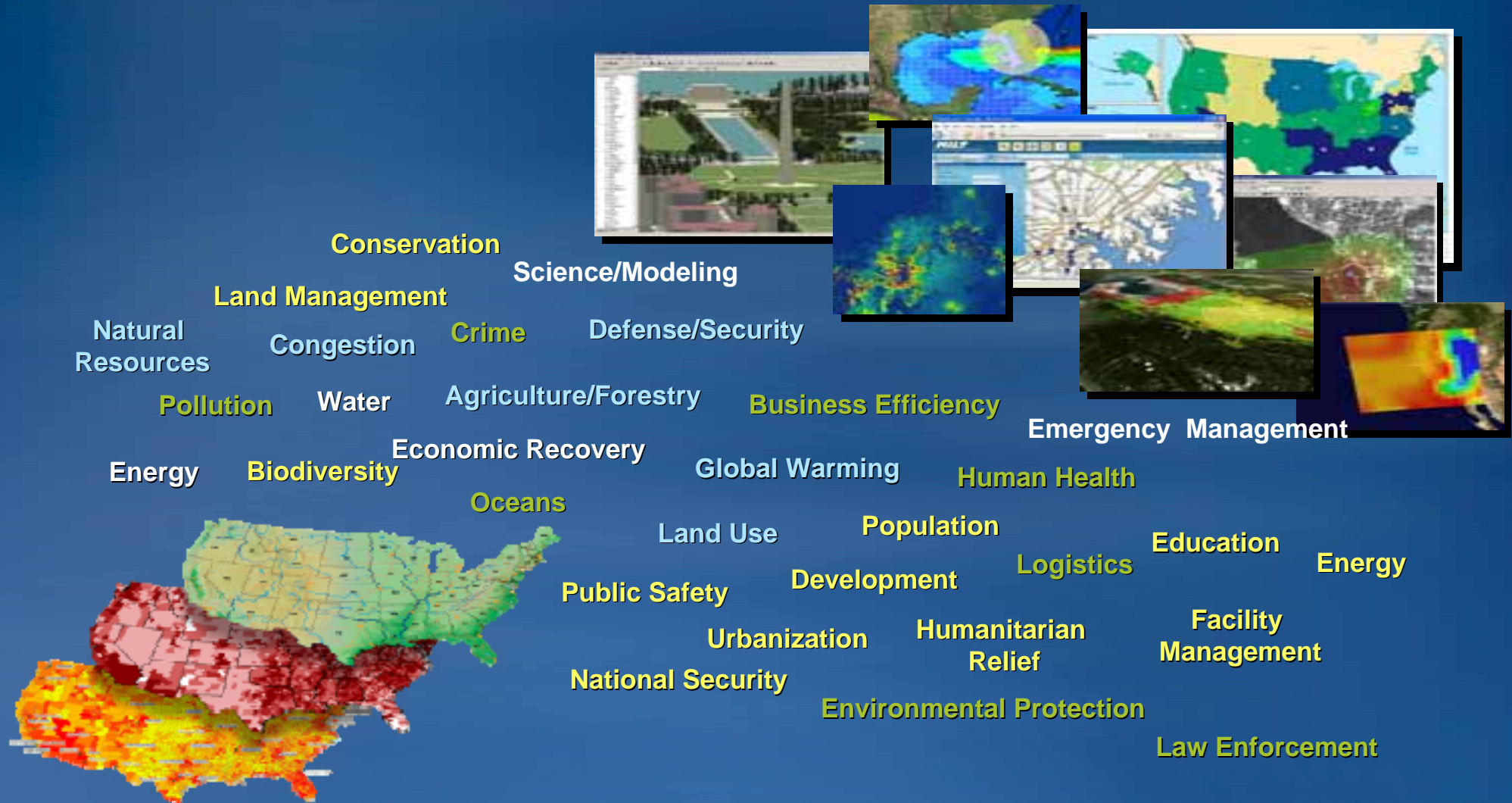


Discovery and Access of Geospatial Resources using the Geoportal Extension

Marten Hogeweg
Geoportal Extension Product Manager

DISCOVERY AND ACCESS USING THE GEOPORTAL EXTENSION

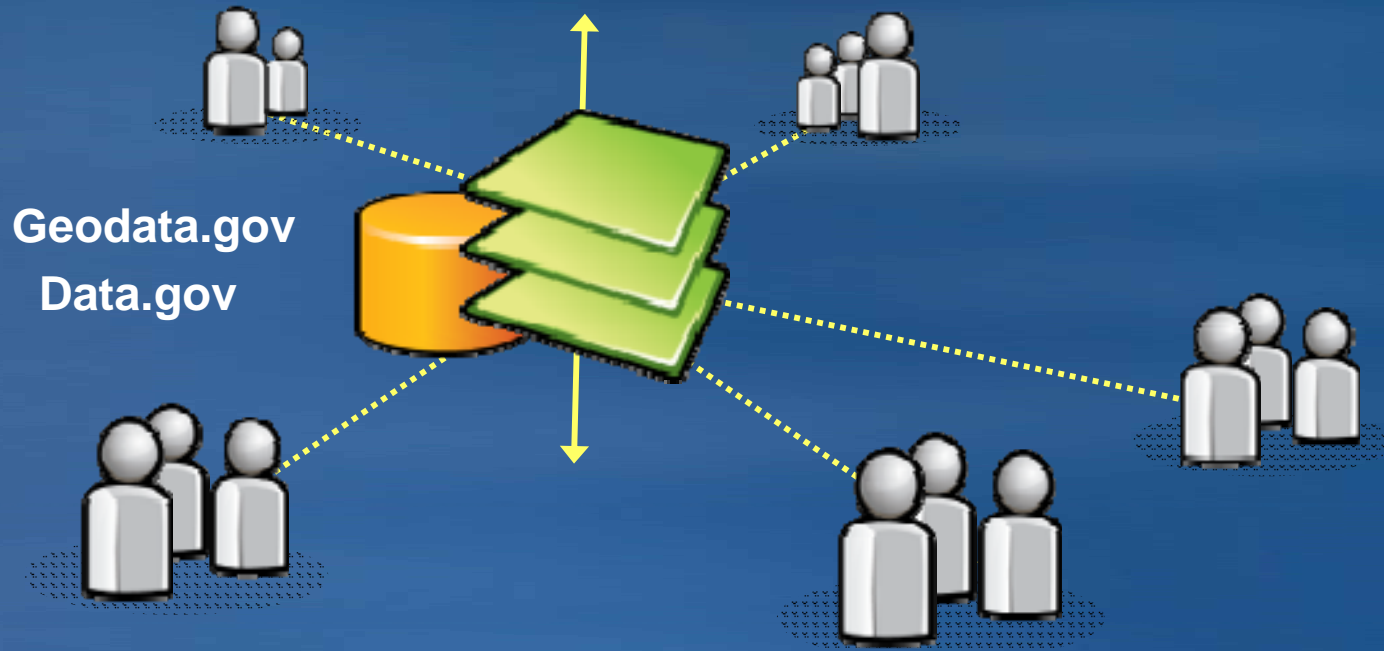
Geospatial Data Is Very Valuable to Government Used in Many Integrated Applications



Improving Planning, Management, and Decision Making . . .

Data Sharing Has Been a Key to This Success

Many Agencies Consider Sharing Part Of Mission



Open Government Directive Provides New Drive For Data Sharing

ArcGIS Server Geoportal Extension

Enabling discovery and use of geospatial resources

- Search and view geospatial resources
- Manage, publish, and store metadata
- View live map services
- Download data



Use Case: “I want to find data ...”

Solution:

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

Search

The screenshot displays the ESRI Search interface. At the top, there is a search bar with the word 'wind' entered and a 'Search' button. Below the search bar, there are filters for 'WHERE' (Anywhere, Intersecting, Fully within) and a map showing the search results. The search results are listed on the right side of the interface. The first result is 'Quicklook Wind Speed', followed by 'Global Surface Meteorology Monitoring Network', 'NCEP Forecast', and 'WMO Manual on C'. A dropdown menu is open, showing 'CONTENT TYPE' with options: Any, Live Map Services, Downloadable data, Offline Data, Static Map Images, Documents, Applications, Geographic services, Clearing Houses, Map Files, Geographic Activities, and UnKnown.

Search

Results 1-4 of 4 record(s)

Expand results Zoom To Results Zoom To Searched Area

Quicklook Wind Speed

Wind speed 10 meters above the water surface, derived from surface roughness (wind stress)

Website Open Details Metadata Zoom To

Global Surface Meteorology Monitoring Network

Global Surface Meteorology Monitoring Network (GSN) is a wind dataset gathered by gathered by WMO. Currently, there are about 10,000+ GSN_MET at

Website Open Details Metadata Zoom To

NCEP Forecast

The NCEP Forecast W of several meteorolog humidity, precipitation

Details Metadata

WMO Manual on C

The WMO Manual on C relating to weather, climate, French, Russian and S

Open Details Metadata Zoom To

See results through f

» Additional Options

CONTENT TYPE

Any

Any

Live Map Services

Downloadable data

Offline Data

Static Map Images

Documents

Applications

Geographic services

Clearing Houses

Map Files

Geographic Activities

UnKnown

Use Case: “I want to make a map ...”

Solution:

- Preview services:
 - ArcGIS Server Map Services
 - ArcIMS Image Services
 - OGC WMS
 - GeoRSS
 - KML
- Provide integration points for map viewer platforms
 - JavaScript, Flex, Silverlight
 - Java ADF viewer as starting point for domain applications
 - ArcGIS Desktop ArcMap
 - ArcGIS Explorer



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

Solution:

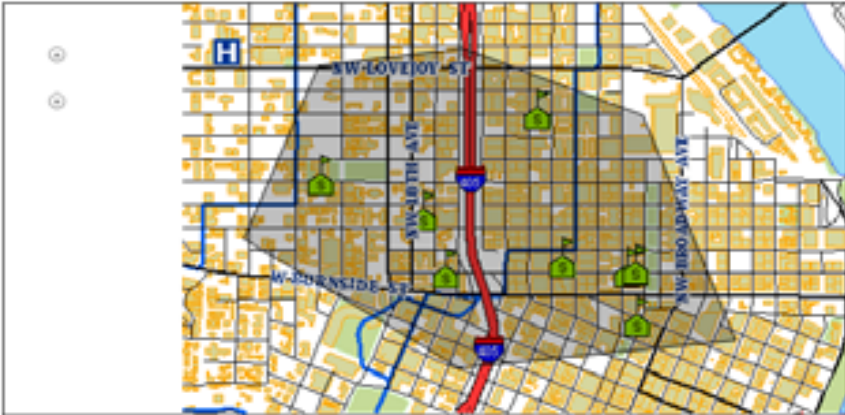
- Provide page with simple choices for:
 - Selecting area
 - Selecting data
 - Setting options
 - Deliver download link through email
 - Vector data only
- Based on Geoprocessing Service
- Extensible in Python

Download

e-mail address:

Output file format:

Projection:



Places

- ☒ Hospitals
- ☒ Schools

Transportation

- ☐ Major Roads
- ☐ Minor Streets

Hydro

- ☐ Rivers and Lakes
- ☐ Streams

Land Records

- ☒ Buildings
- ☐ Parks



Use Case: “I want to know when new data is available ...”

Solution:

- User specifies search criteria
- Give user link to a GeoRSS feed
- User subscribes to GeoRSS feed

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

The collage illustrates the process of finding and subscribing to a GeoRSS feed. It includes:

- A screenshot of the **geoportal** website showing a list of feeds, including "ESRI GEO Portal AIRNOW WCS: Airnow WCS" and "ESRI GEO Portal CALPUFF WCS: CALPUFF WCS".
- A snippet from the **GIS Portal GeoRSS** page explaining that users are viewing a feed with frequently updated content and providing a "Subscribe to this feed" link.
- A portion of the **ArcVoyager Canada's Climate** feed, showing details about temperature and polygons.
- A screenshot of an **Internet Explorer** dialog box titled "Subscribe to this Feed". The dialog shows the feed name "My Custom Search GeoRSS" and the location "Feeds". It includes "Subscribe" and "Cancel" buttons, along with explanatory text about how the feed is updated.

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

Solution:

- Give user choices for sharing metadata:
 - Register Servers or Services Directly
 - Create metadata online
 - Upload metadata
 - Register SDI catalog site for harvesting
- Support metadata standards:
 - INSPIRE
 - North American Profile
 - Dublin Core

The image displays two 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"), a "Level of Detail" section with radio buttons for "Simple Item Description", "Detailed Item Description", "ISO 19139/19115", "ISO 19139/19115", "North American Profile", "INSPIRE Profile", and "IEEE Standards". A "Proceed" button is at the bottom. To the right, the "Create Repository" section includes fields for "ID:" and "Repository UUID:" (both with a note "Value will be generated upon saving."), a "Protocol Type" section with radio buttons for "ESRI MS", "Z39.50", "OAI", "WAF", and "CSW" (selected), and fields for "Name:" and "Host Url:" with a "Test" button.

Upload Metadata: This form allows users to upload metadata. It includes a "Browse" button to select a metadata file from the local system or a network path. The "On behalf of:" dropdown is set to "mhogeweg". Below, there are radio buttons for "Browse for a local file" (selected) and "Specify a network path". A "Local path:" field is followed by a "Browse..." button. At the bottom, there are "Upload" and "Validate" buttons.

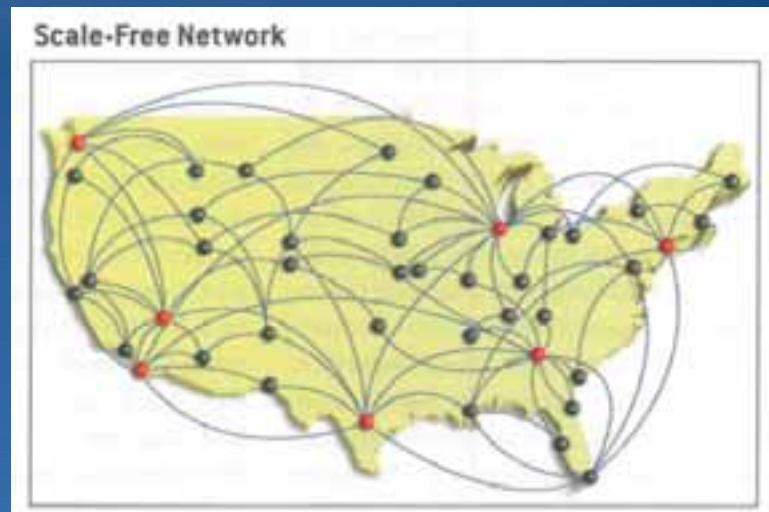
A dropdown menu for "Profile:" is open, showing a list of metadata standards including "ArcIMS 9.3 CSW 2.0.2 OGCCORE", "CompuSult WES CSW 2.0.1 OGCCORE", "ArcGIS Online", "terra catalog CSW 2.0.2 AP ISO", "terra catalog CSW 2.0.0 AP ISO", "EXCAT CSW 2.0.2 OGCCORE", "SRU CSW 2.0.2 Gateway to Z39.50", "IONIC CSW 2.0.0 ebRIM", "ArcIMS 9.2 CSW 2.0.1 ebRIM", "NASA CSW 2.0.2 APISO", and "CompuSult WES9 CSW 2.0.0 OGCCORE".

DEMO

**CLEARINGHOUSES ALONE
ARE NOT ENOUGH**

Data Sharing is a Social Activity

- Groups of people with a common interest or goal
- Relationships help achieve goals
- Invariant to application domain:
 - Enterprise, State, Country, Global, Community, ...
 - Emergency Response, Natural Resources Management, Climate Change, ...



Use Case: “Help! I need somebody...”

POR_Neighborhoods
This service provides neighborhood information for Portland, Oregon. This service is in the WGS84 projection (4326) and is cached to match the ArcGIS Online tiling scheme. Use this service to display tiles in a web application...

Zoning
This service provides land information, including buildings, and zoning designations and is cached to match the ArcGIS Online tiling scheme. Use this service to display tiles in a web application...

San Francisco

Open Preview Globe (.kml) Globe (.nmf) ArcMap Details

Bookmark & Share

- Twitter
- Print
- Digg
- MySpace
- Facebook
- More... (153)
- Get the AddThis Toolbar
- AddThis
- Favorites
- Delicious
- Google
- Live
- StumbleUpon

Geoportal Extension 9.3.1

Home Browse Data Search Downloads Launch Map Viewer

Find Data

Twitter

Using the ArcGIS Server Geoportal Extension 9.3.1, ArcGIS users can discover and manage their data.

geoportal

Geoportal 9.3.1 Zones and Agglomerations used for air quality assessment and management in Poland: <http://www.gis.gov.pl>

Geoportal 9.3.1 Help Desk: <http://www.gis.gov.pl>

Geoportal 9.3.1 Geoportal: <http://www.gis.gov.pl>



Use Case: “I want to ensure 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 header for "FireWatch WMS" with a description: "A Web Map Service (WMS) that displays detected 'hot spots' in Southeast Asia (Indonesia and Australia) based on satellite sensing". Below this are links: "Open", "Preview", "Add To Map", "Details", "Metadata", "Zoom To", "Share", and "Test". The "Test" link is circled in black. Below the header, there's a section for "WMS coordinator for SVG Map" and "MNP live WMS ma".

The main part of the screenshot shows a "Service Analysis Report for 2009-07-09 2:20:09". It includes a "Service Information" section with a "Service Type" of "wms" and a "Service URL" of "http://www.mapserver.org/geoserver/wms?Service=...". A "Service Status" section shows a green checkmark, an upward arrow, and a score of "99.45%".

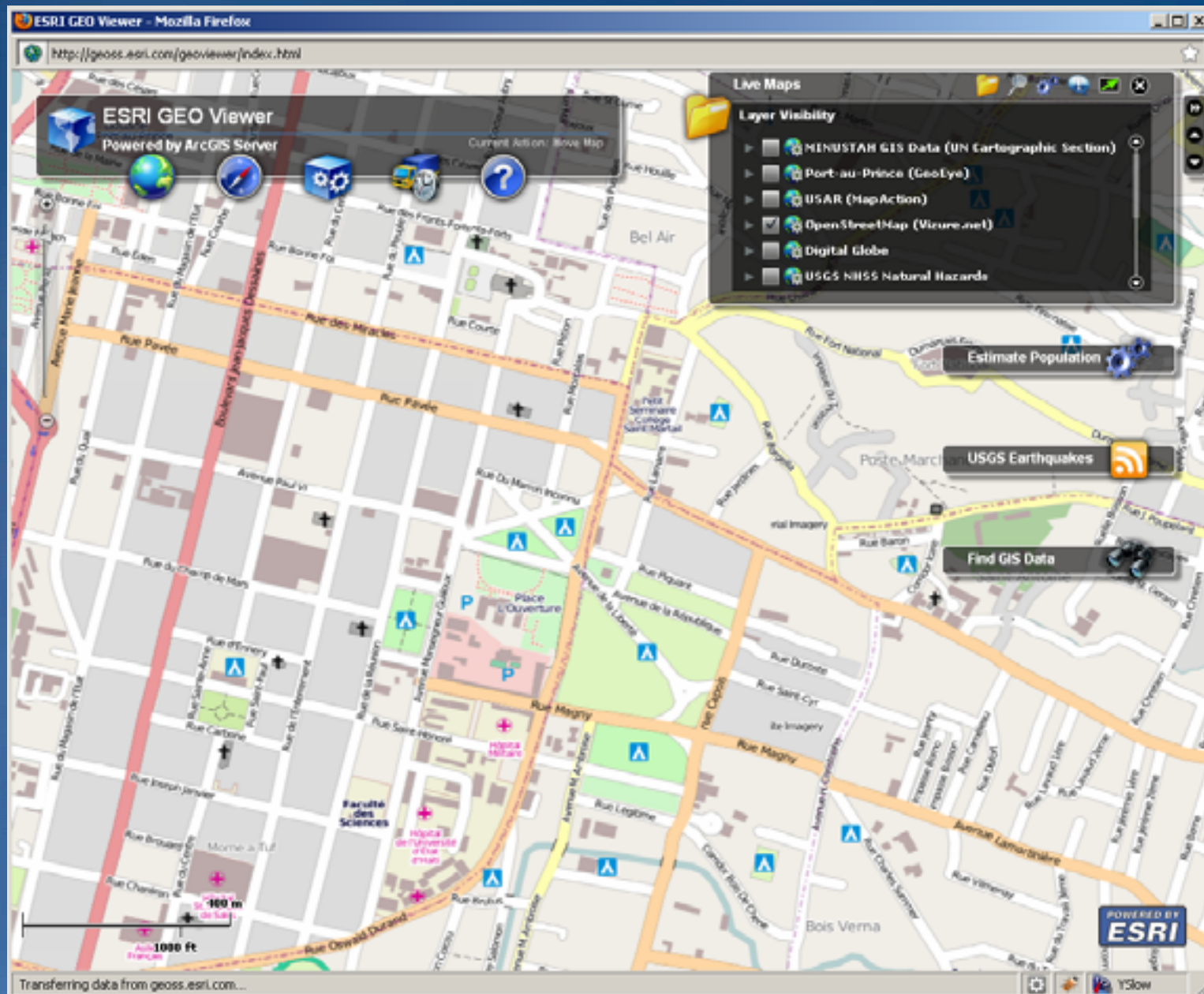
The "Test Results" section shows a table with columns: "Test", "Status", "Response", and "Score (0 - 100)". The table has one row for "getMap" with a status of "Success", a response of "200 OK", and a score of "100".

Below the table, there's a summary table of tests performed on the service:

Test	Status	URL
getCapabilities	Success	http://www.mapserver.org/geoserver/wms?Service=...&request=GetCapabilities
getMap	Success	http://www.mapserver.org/geoserver/wms?Service=...&request=GetMap

Example: GEO Viewer – Haiti Support

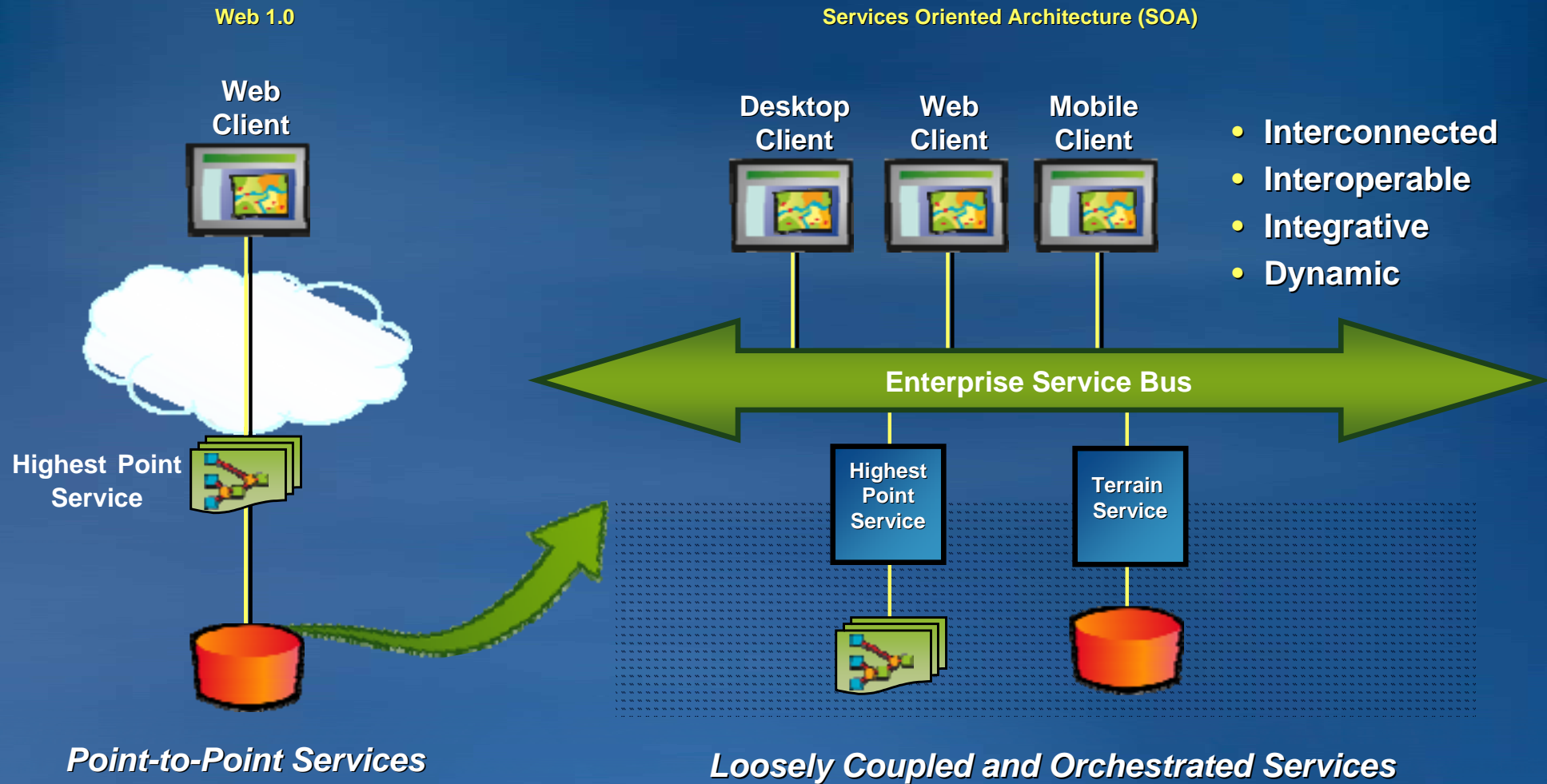
OpenStreetMap integration



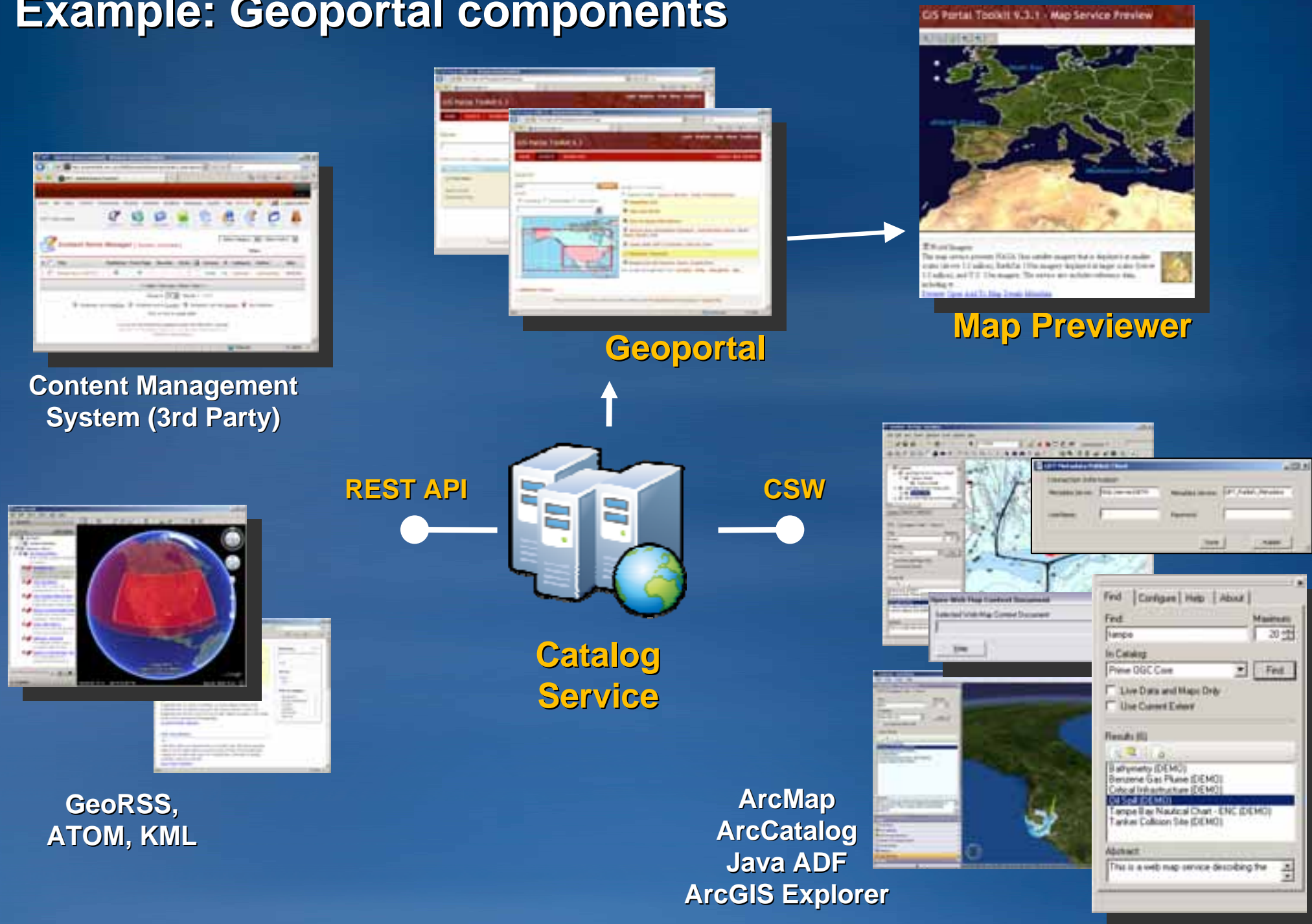
FROM PLUMBING TO PLATFORM

Platforms Go Beyond Application Silos

Service Oriented Architectures – a Framework for Integration



Example: Geoportal components



ESRI Geoportal Services

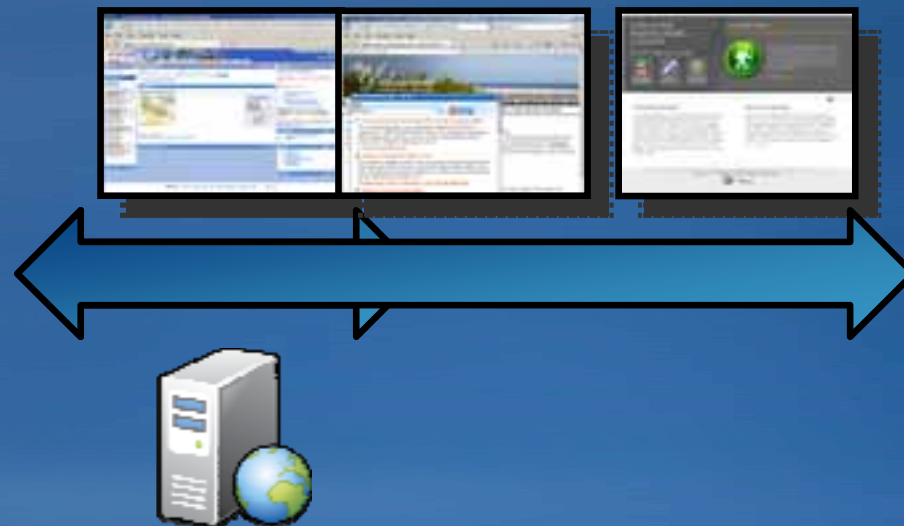


- **OGC CS-W Discovery Interface**
 - Supports interoperability with all OGC CSW standard services
- **REST Discovery Interface**
 - Supports OpenSearch
 - Supported Output Formats: GeoRSS, ATOM, HTML, JSON, and KML
 - Supported Filters: Free Text, Spatial Extent, Content Type, Data Category, Update Date
 - Search Widget
- **GPT Consumes:**
 - OGC CS-W, Z39.50, ArcIMS, WAF, OAI for metadata
 - OGC W*S, ArcGIS Server, ArcIMS, KML, GeoRSS for display

Example: Data.gov



- Data.gov – new initiative to transparent government
- Data.gov looked at building yet another catalog for data
- Geodata.gov and Data.gov collaborated
- Geodata.gov now supplies Data.gov with 150,000+ downloadable datasets through an OGC Web Service



Example: Web Flex Viewer with search widget



Discover, View and combine shared data

- Discovered and use resources
- Processing functionalities

Technology behind the scenes

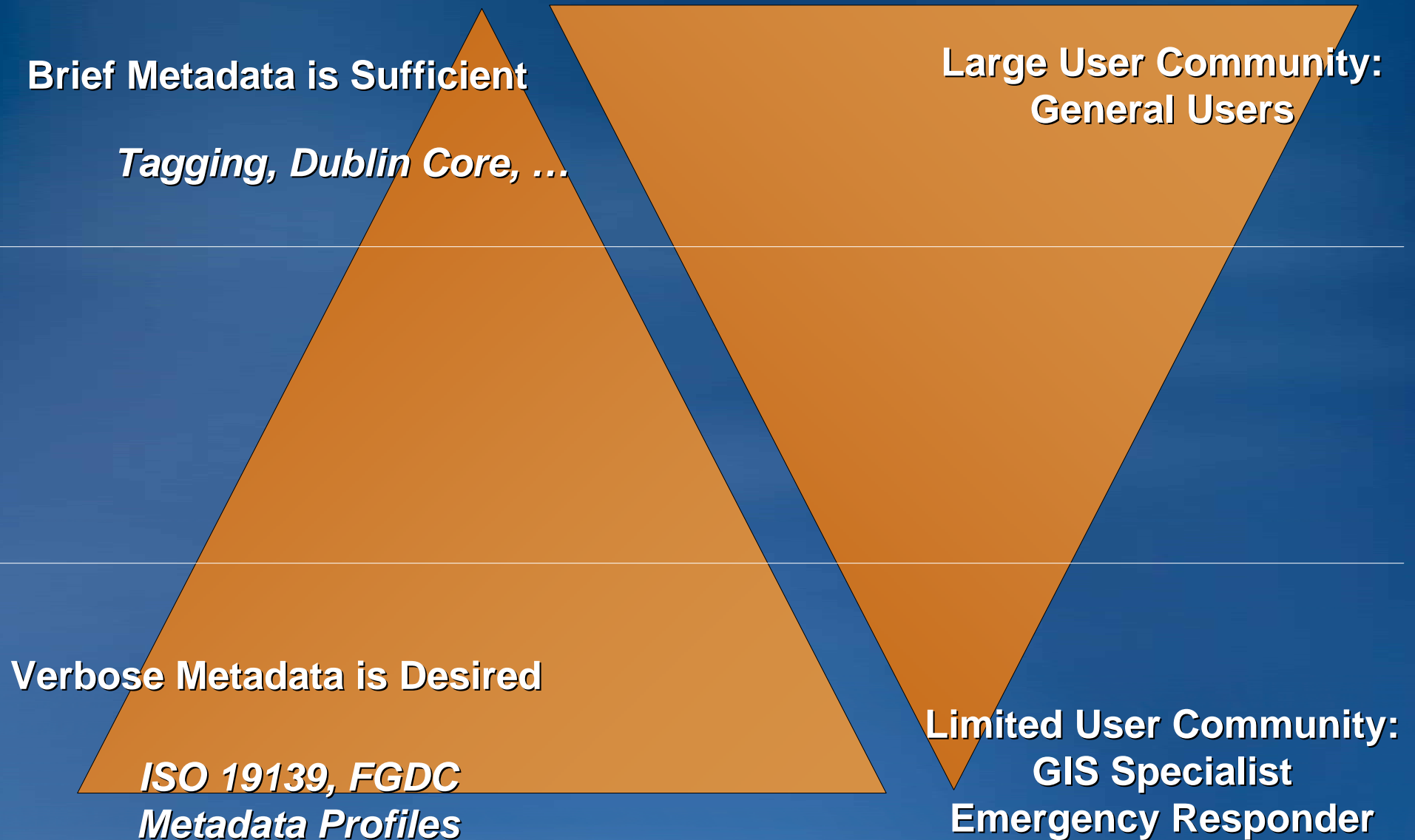
- ESRI Flex Mapping API and the ESRI Flex Viewer for
 - Visualizing OGC WMS, GeoRSS, ...
- ESRI Geoportal REST interface for
 - Search
- ArcGIS Server for
 - Map services
 - Processing (calculate population, ...)



http://webhelp.esri.com/geoportal_extension/9.3.1/index.htm#flex_widget.htm

GEOPORTAL 10

Unifying Structured Content with Unstructured Resources



Discovery and Access of Unstructured Content

- ## Flickr

YouTube

Microsoft Sharepoint



Additional Search Providers and Federated Search

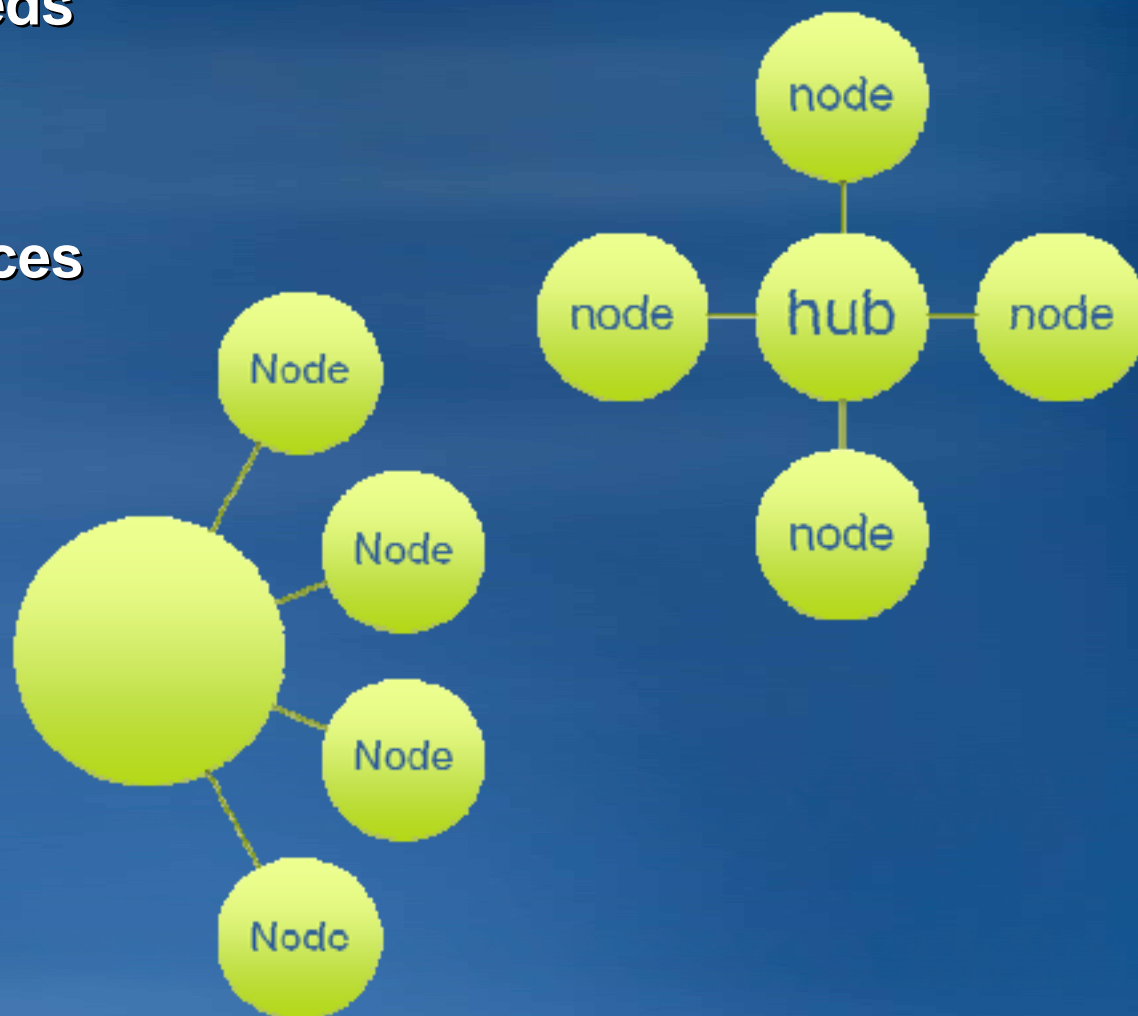
-
- The screenshot displays the Geoportal Extension 9.3.1 web application. The browser window at the top shows the URL 'http://localhost:8080/geoportal/extension/9.3.1'. The application's header is red and contains the title 'Geoportal Extension 9.3.1' and navigation links: 'HOME', 'SEARCH', and 'DOWNLOAD'. Below the header is a search bar with the text 'search as : shh shh' and a 'SEARCH' button. To the right of the search bar is a sidebar with a 'This Site - 202 results' section. The main content area displays a map of a coastal region with a red rectangle highlighting a specific area. The browser's address bar shows the URL 'http://localhost:8080/geoportal/extension/9.3.1'.

[illegible]

Geoportal 10

Synchronize Catalogs

- Looking at synchronizing multiple catalogs
- Driven by enterprise needs
- Near real-time
- Multi-directional
- Sync Metadata for Services
 - Generate
 - Update
 - Delete



Geoportal 10

Server-side Harvesting

- Re-harvesting servers and uploaded services
- Harvest (geoportal) sitemaps
- Harvest geodata services (sync)
- Harvest ArcGIS Servers (sync)

- Retire desktop harvesting tool
- Retire desktop harvesting service
- Supports pure Linux implementation
- Harvesting and Directed Searching closely related

Geoportal Version 10

Identity Management

- OpenID/Oauth
- Group-level administrators



Login

Please provide your credentials.

Username:

Password:

Login

[Forgot Password?](#)

* ***Bold-Italic labels indicate a required field***

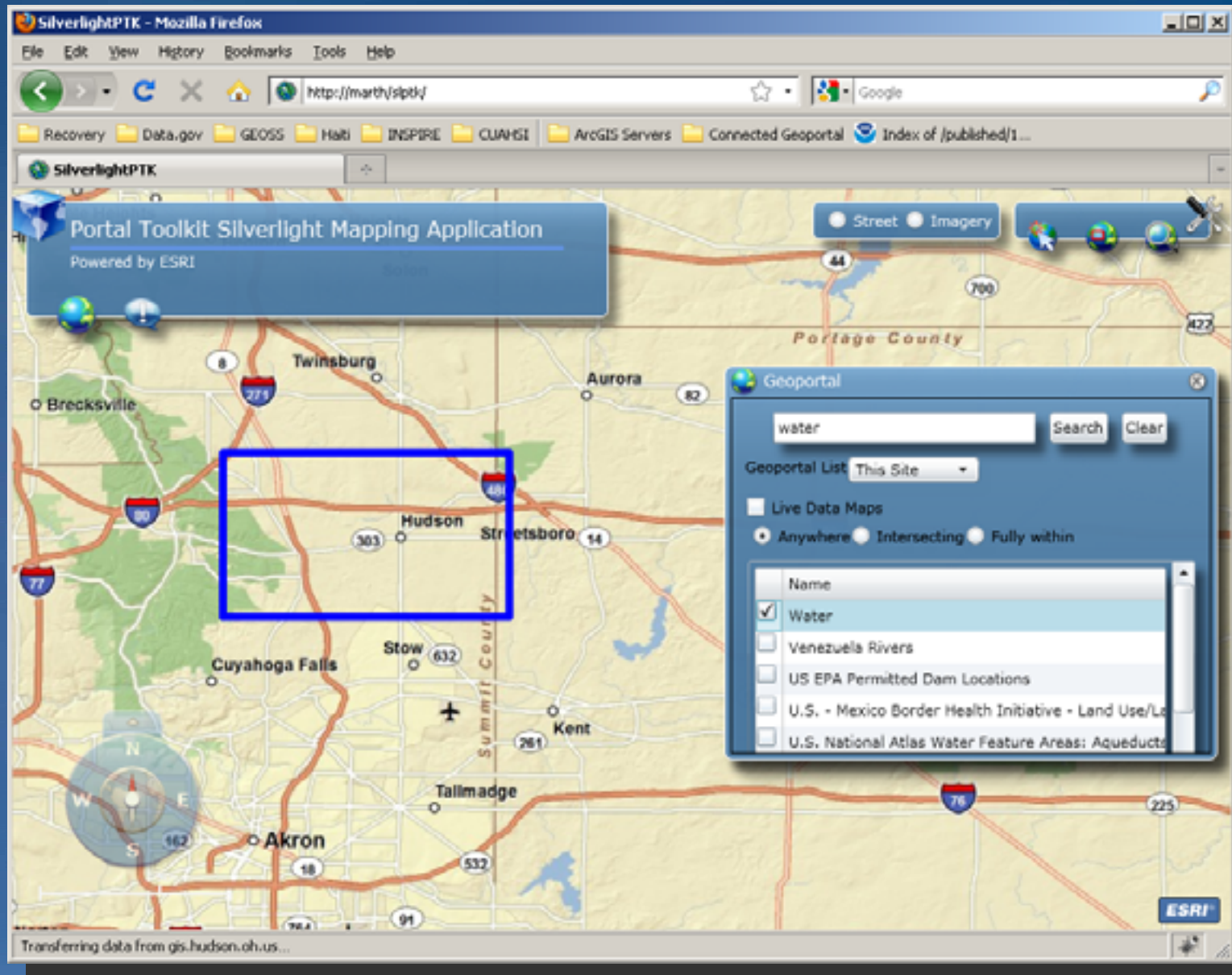
Please provide your OpenID.

Choose your identity provider from:



Geoportal 10

Silverlight Widget



Geoportal 10

Update Desktop Extensions

- **CS-W Client for ArcGIS Desktop and Explorer**
 - Update UI to match new 10 style
 - Support additional resource types
- **Publishing Client for ArcGIS Desktop**
 - Update UI to match new 10 style
- **WMC Client for ArcMap**
 - Rewrite in C#

Geoportal 10

Index Statistics

- Browse by metadata facets:
 - More like categories in retail store websites
 - Not editable, based on catalog content
 - Exposed through REST
- Use to build:
 - Browsing capabilities
 - Word clouds
 - Content Channels
 - Reports for Administrators



The screenshot shows a web browser window with the URL <http://marth/geoportal/rest/index>. The page displays the following statistics:

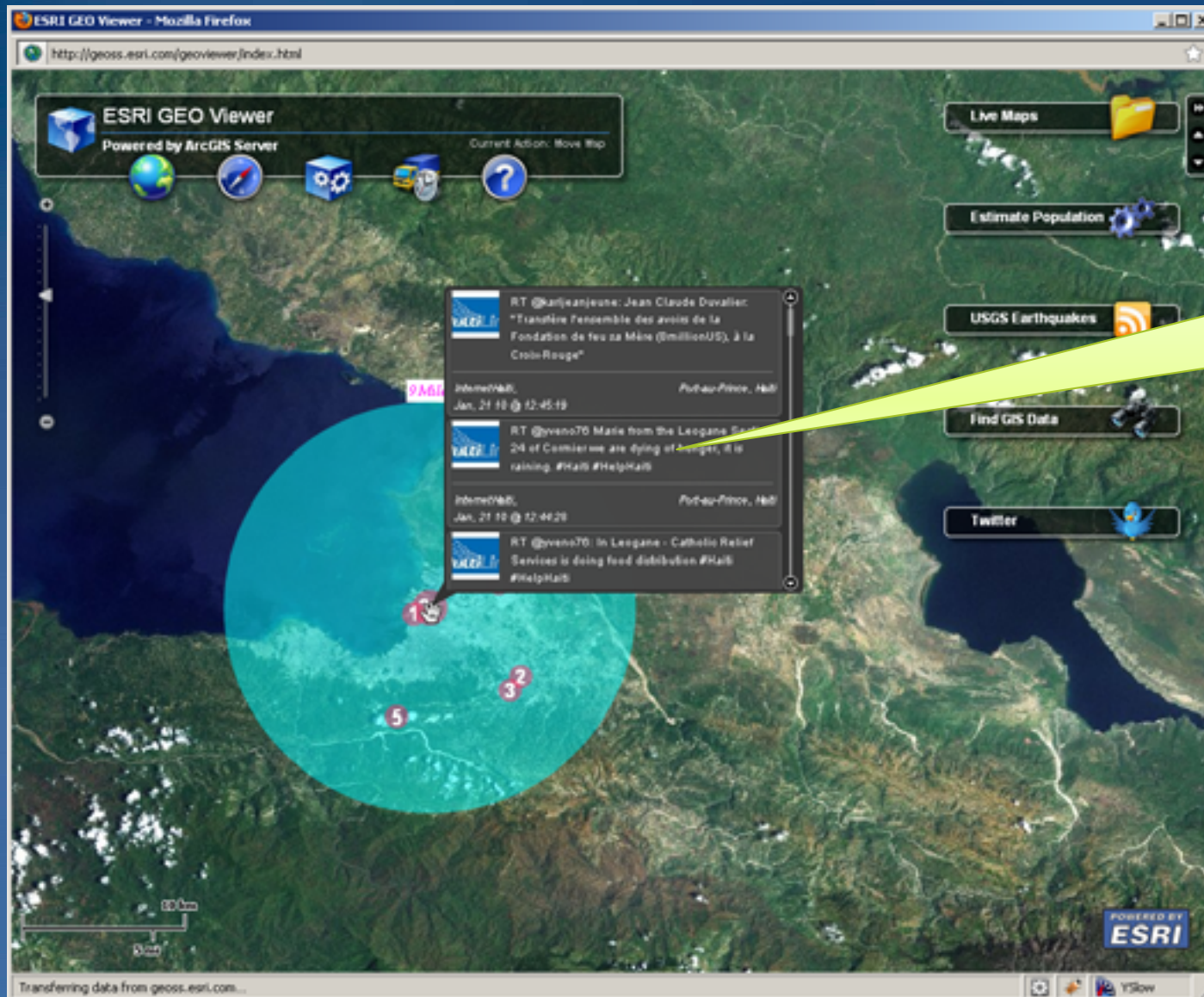
- Indexed fields: 11
- Indexed documents: 331

Field	Documents
contentType	331
dateModified	331
title	331
uuid	331
resource.url	279
abstract	242
fileIdentifier	198
dataTheme	178
body	98
url	19
url	16

Below the table, there is a list of links: [application](#), [clearinghouse](#), [document](#), [downloadabledata](#), [geographicactivities](#), [geographicservice](#), [livedata](#), [offlinedata](#), and [unknown](#).

Geoportal 10

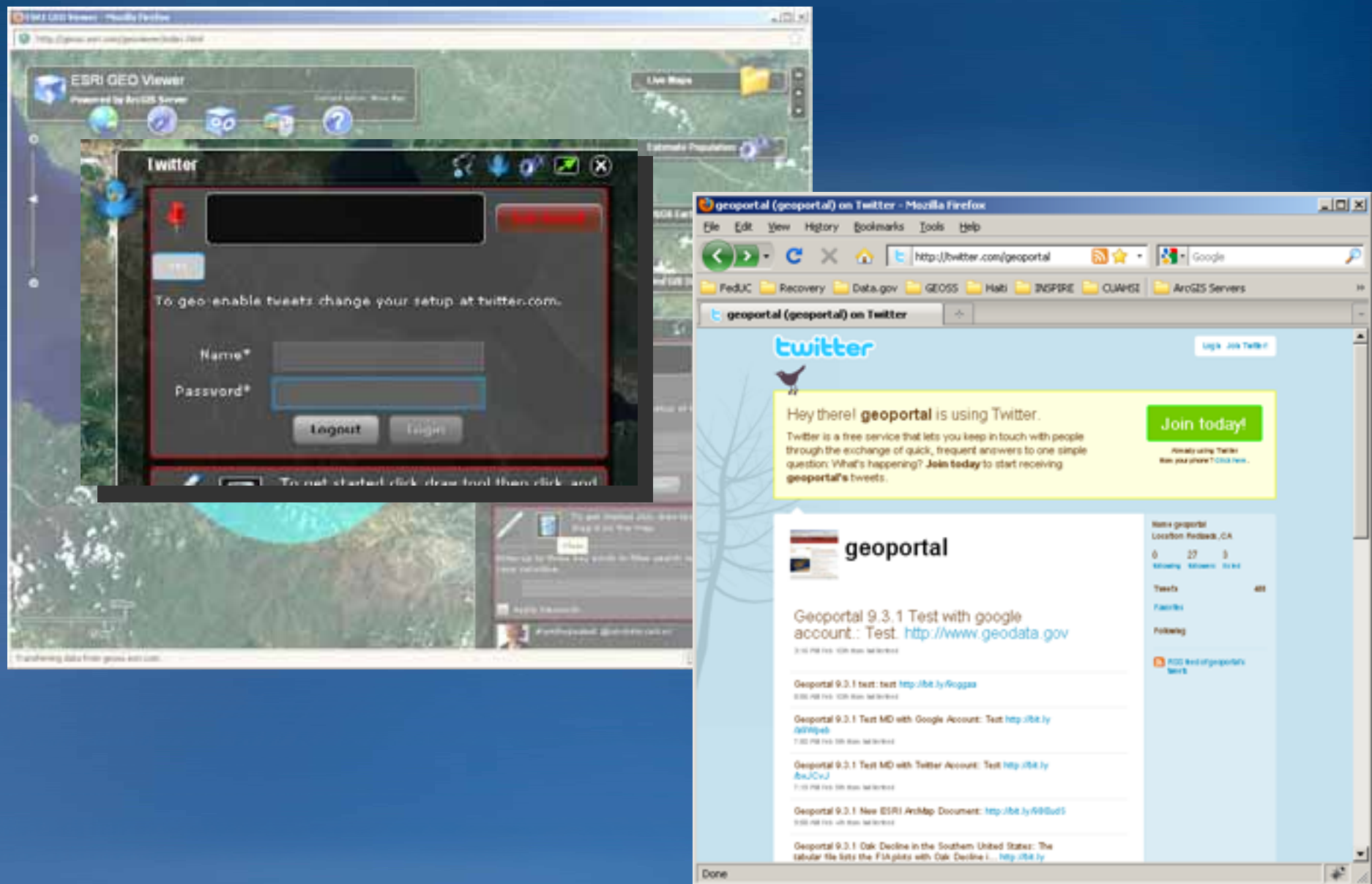
Twitter as data source



Follow tweets within radius

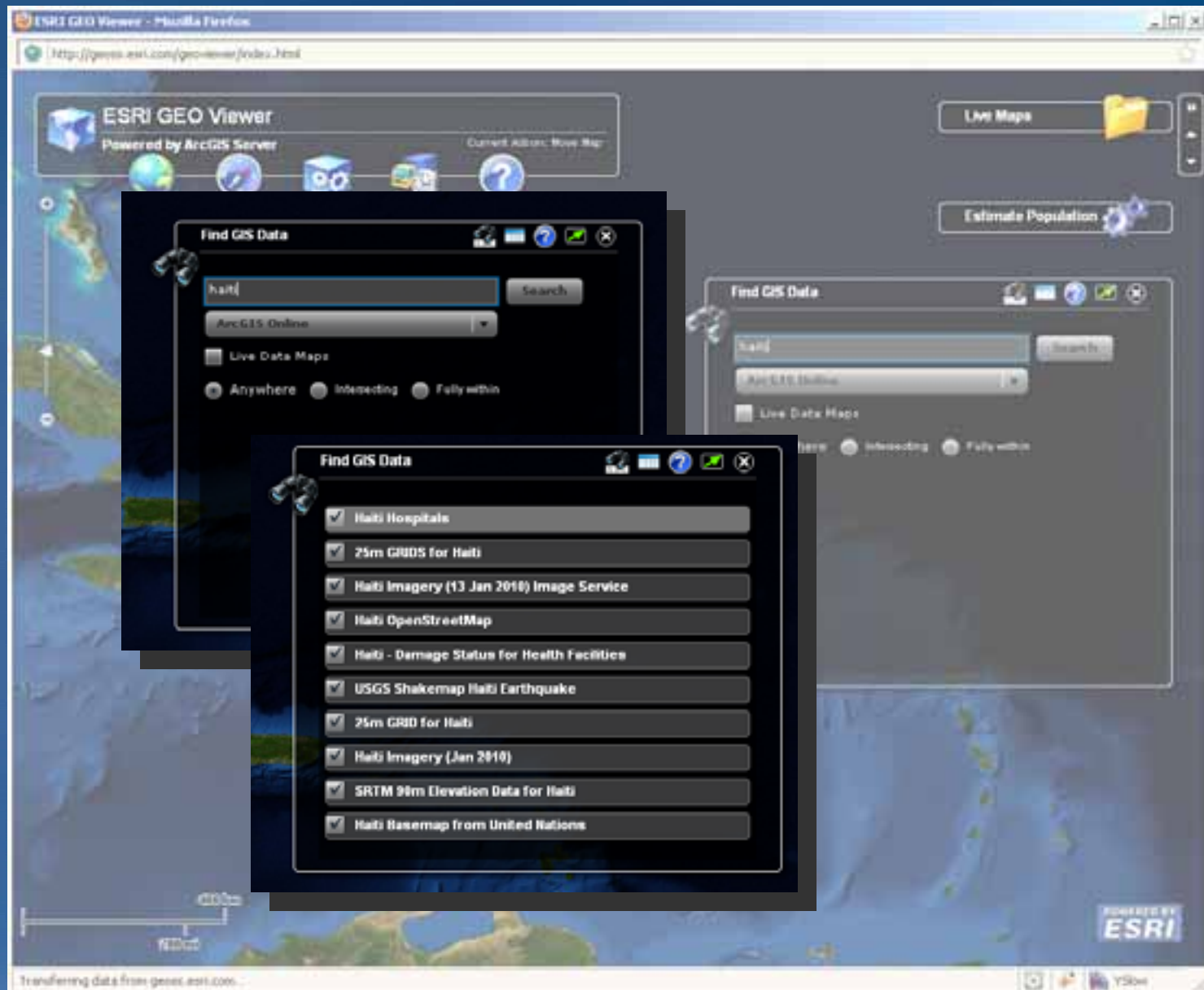
Geoportal 10

Twitter client



Geoportal 10

Expand on ArcGIS Online Integration



Questions?



SDI /Geoportal User Group – Friday 10:30 AM Room 149 B



ArcGIS Servers



GIS Users



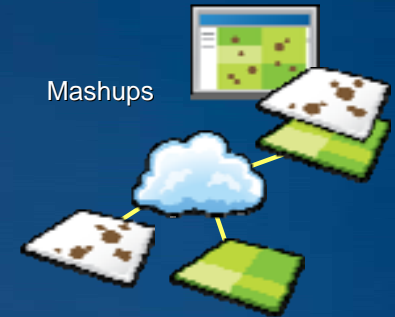
Geodatabase



Web Users



Web GIS



Mashups



ArcGIS Server



ArcGIS Online



Open Standards



ArcGIS Desktop
Authors



Web Blog



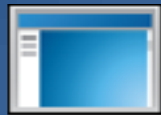
Web Blog



Mashups



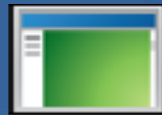
Mashups



Browser



Browser



Browser



Browser



Web Map



Map



Web Map



Map



Web Map



Map



Raster Files



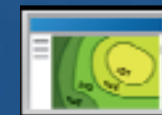
Raster Files



Web Map



Map



Web Map



Map



Web Map



Map



Web Map



Map



Web Map



Map



Explorer



Web Map



Globes

Layers



Database



Files



Files



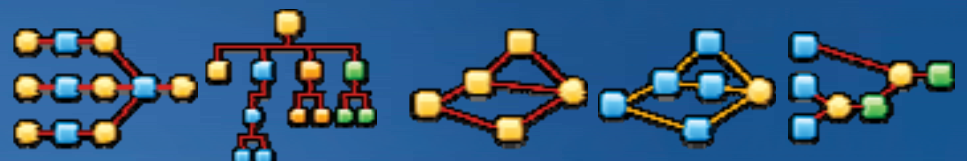
Files



CD/DVD



Internet



Models

Models



Data Server

Mobile



Data Appliance

Desktop



Designing & Planning

Situational Awareness

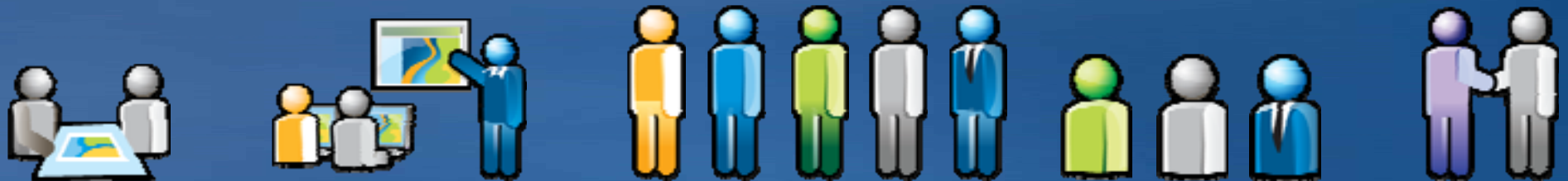
Professional Services

Tech Support

Satellite

Satellite

Windmill



Professional Services

Education

Business Partner



Mobile GIS User

GIS User

