

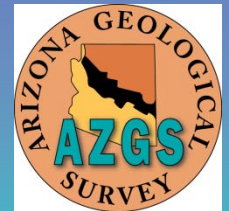
# US GIN Project status

Stephen M Richard

Arizona Geological Survey



GIN is supported in part by the National Science Foundation under award EAR-0753154 to the Arizona Geological Survey, acting on behalf of the Association of American State Geologists, and by the USGS National Geologic Map Database



# Geoscience Information Network

- Develop services and vocabularies to enable exchange of geoscience information
- Work with data providers to implement those services
- Objective is to get more geoscience information accessible online
- Build on existing resources -- NGMDB, GEON, GeoSciML, NGGDPP...



# Current Priorities

- **Catalog services – find and use resources**
  - NGMDB map catalog, GEON, NDC
- **Web map service (WMS) – georeferenced geologic map images**
- **Web feature service (WFS) – GeoSciML vector data with attributes**
- **EarthChem – geochemical data**
- **National Geothermal Data system**



# http://lab.usgin.org

## US GIN Lab

The Geoscience Information Network Commons

 Search

- SPECIFICATIONS AND MODELS
- DEVELOPMENT
- IMPLEMENTATIONS
- GIN GROUPS
- NEWS
- CONTACT
- LOGIN / REGISTER

### SPECIFICATIONS AND MODELS

✓ [Learn](#) about setting up a Geoscience Information Network

### DEVELOPMENT

✓ [Build](#) Geoscience Information Network components

### IMPLEMENTATIONS

✓ [Test](#) drive components of a Geoscience Information Network

#### GIN NEWS

» [GIN Lab Beta](#) | 2009-06-16 11:17  
A welcome to the GIN Lab site.

#### TODAY'S POPULAR CONTENT

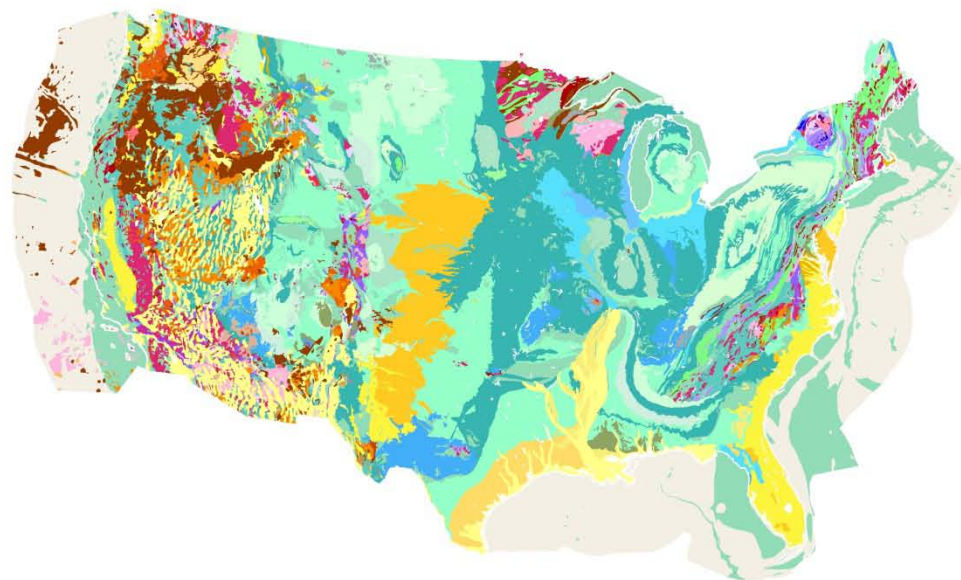
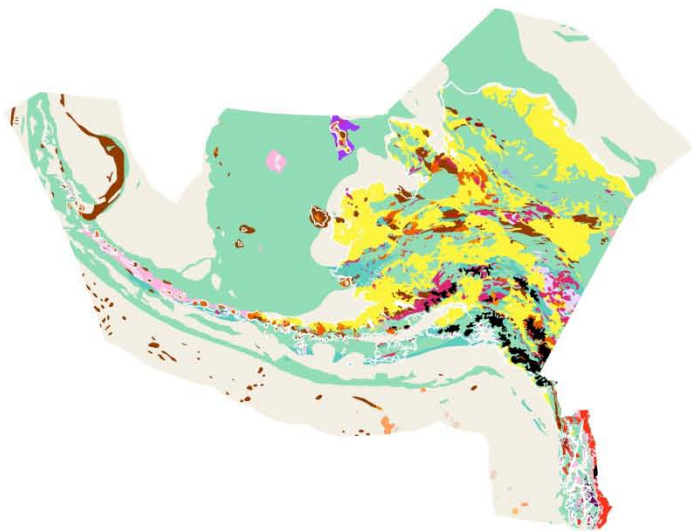
» [US GIN CSW Simple Client](#) (1)  
» [CatalogConnector CSW Client](#) (1)  
» [Catalog service development](#) (1)

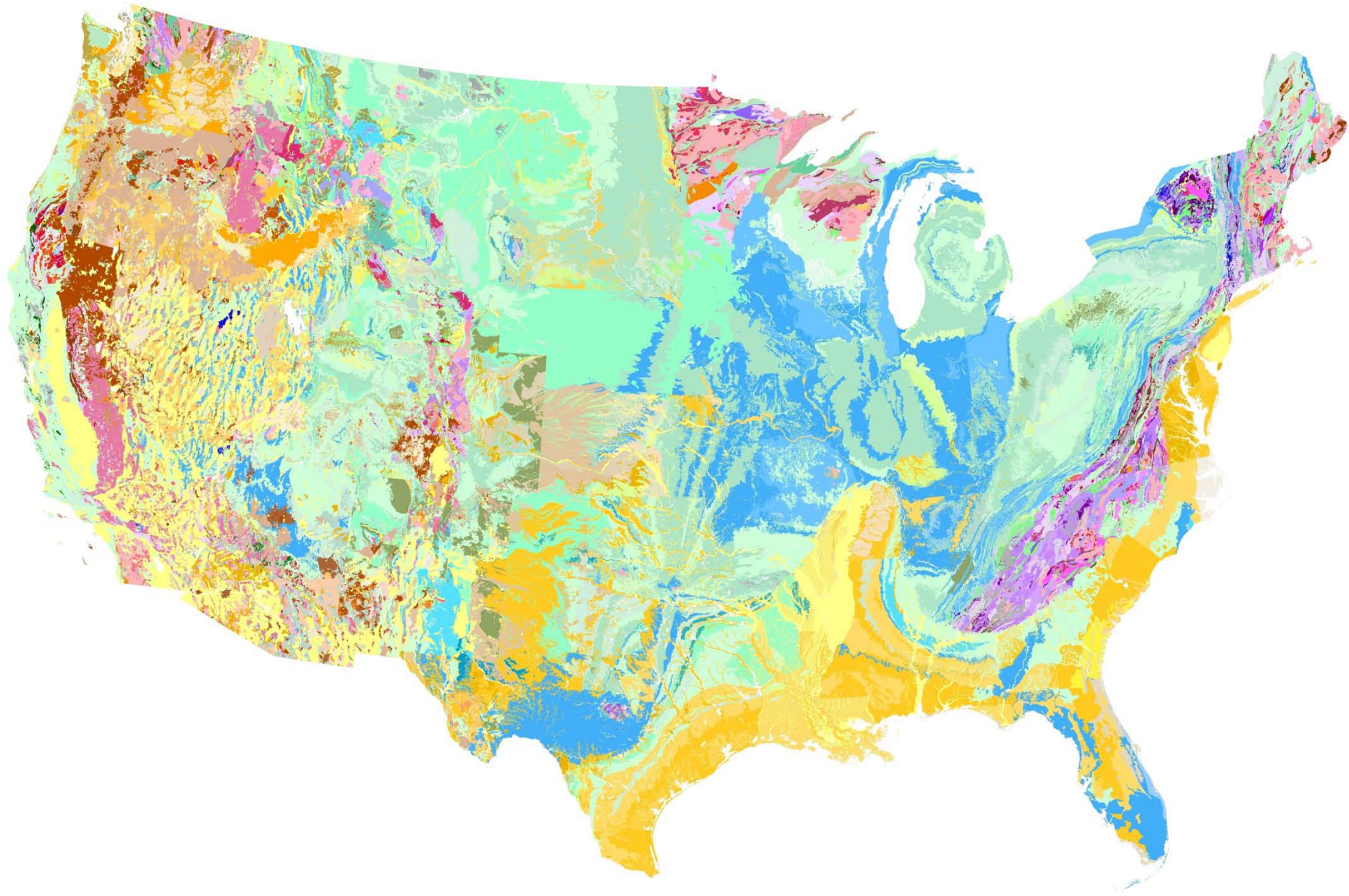
1 2 3 next > last >

more

#### RECENT ACTIVITIES

Title	Type	Last Update
US GIN CSW Simple Client This is a test client developed by eXcat	Page	2 days 12 hours
CatalogConnector CSW Client US GIN CatalogConnector Client (Alpha) This promising, stand-alone, Java-based, CSW web client is currently being developed by SDI Catalonia (IDEC) at <a href="http://sourceforge.net/projects/catalogconnector/">http://sourceforge.net/projects/catalogconnector/</a>	Page	2 days 12 hours
Introduction to specifications and models Service proposals The major goal of the Geoscience information network project is to develop community web service specifications and implement them to make more geoscience information available on line and to automate access to actual information resources. To achieve this we are collecting and...	Resource	3 days 49 min
What is this Group thingy? GIN Groups are similar to Google Groups. It allows us to organize ourselves around any topic. In this case, I created this group to change ideas about improving this site and to inform you of what's going on with the site. You can think of this group as a community blog.	Group WIKI Post	3 days 53 min
Catalog service introduction A web service interface to search metadata catalogs. With the funding of the GIN project, and its dependency on existing (GEON, NGMDB) or soon to exist (NGGDD) hosts for catalog/discovery services, the specification for	Resource	3 days 2 hours





# Conclusion

- Standardized service to integrate catalogs => more effective resource discovery
- WMS technology is mature enough to roll out production delivery systems

# Thank You



# Blank





# How

- Catalog service—discovery
  - Access from stand alone application or web page
  - Access from within application (e.g. ArcGIS client)
- WMS
  - Get map image with symbolization already done
  - Provides legend and simple get feature info



# Metadata registry

- Database
  - Contains necessary content in separate fields that can be mapped to metadata interchange format
- Content model
  - Author, title, abstract, extent, date modified, identifier, publisher, language, type, format...
  - Dublin core, FGDC, ISO 19115



# Catalog service

- Defines
  - How to compose queries
    - query or filter syntax—SQL, CQL
  - What the user can ask (operations)
    - Get records; Describe schema; Insert, delete, or update records; Harvest records
  - How the metadata is encoded
    - e.g. ISO 19139 xml schema



# Search application (the client)

- Interface (e.g. web page) to assist users to compose and submit queries
  - Might provide pick lists from standard vocabularies
  - Mapping to query schema
- Formats results for easy interpretation
- Provides links to related resources, other features to add value for users
- **If communication with catalog is via service, don't have to build separate client for each catalog server**



# Geologic map content

- Georeferenced digital data
- Symbolized
  - Have to use symbolization tools available in map server
- Polygons and undecorated lines for faults and contacts are simplest



# Web map service

- Produces raster images for maps
- Different environments have different symbolization schemes
  - Free open source servers have limited symbolization capability
- Simple get feature info (single point), commonly servers allow use of templates to provide html formatting for results



# WMS client

- Requests a particular map portrayal for the current view frame
- Does mapping from view coordinates to geographic coordinates for requests
- Provides uses with tools to turn 'layers' on and off, request legend, and get feature info (info click).

