

A Manakin Case Study

Visualizing geospatial metadata & complex items

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Overview

1. The Setup
2. The Collection
3. The Problem
4. The Solution
5. The Result

The Setup

1

Background

- ▶ Repositories increasingly contain complex items
- ▶ Metadata needs are moving beyond basic Dublin Core
- ▶ Traditional approaches fall short

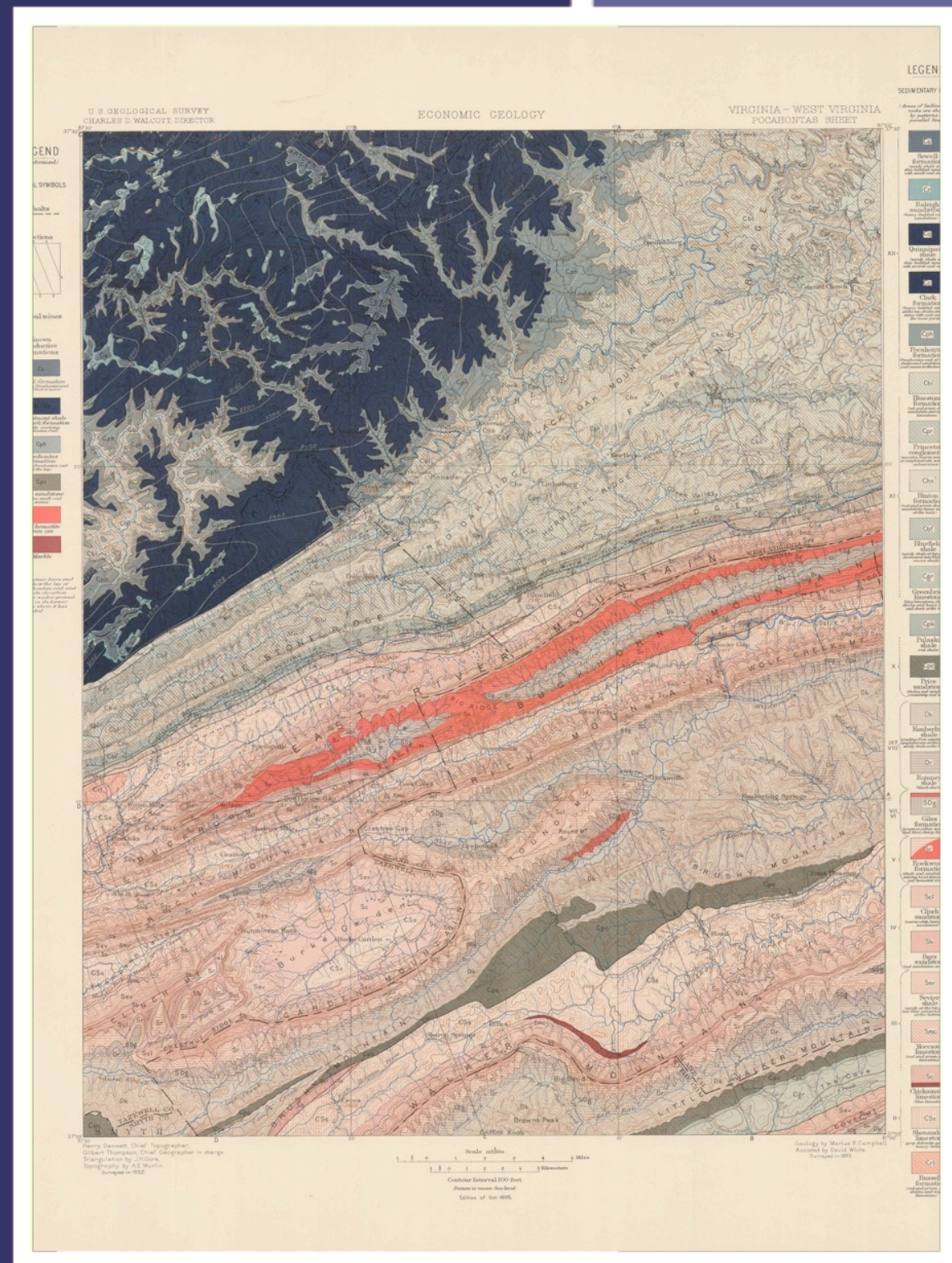
The Collection

2

Geologic Atlas of the United States

- ▶ 227 folios of maps, text and photographs
- ▶ Published by the USGS between 1894 and 1945
- ▶ Focuses on economic geology and geography

- ▶ Value largely historic in nature, but some instances still represent the most recent geologic survey of that coverage area
- ▶ Textual content contains information on geologic features and economic geology of the area



Digitized folios

- ▶ Each folio consists of between 10 and 40 pages
- ▶ Archival images are 300 dpi TIFF, ~100 MB each
- ▶ Only complete digitized version of this series in existence

DSpace collection

- ▶ 1 collection, 227 items
- ▶ Each item had multiple bitstreams; one for each scanned page
- ▶ Extra bitstream added; PDF for screen-viewing

Geospatial metadata

- ▶ Geospatial metadata exists in multiple formats
- ▶ Needed Qualified Dublin Core
- ▶ Used DCMI recommendations for values:
 - coverage.point:
41:30:00N87:45:00W
 - coverage.box:
northlimit=41.75; westlimit=-88;
southlimit=41.5; eastlimit=-87.75

The Problem

3

Browsing

- ▶ DSpace interface optimized for items with fewer bitstreams
- ▶ Uninformative lists + large files = **very** cumbersome browsing

Coverage

- ▶ No way to easily place the folios in their geographic context
- ▶ No searching across coverage area
- ▶ Search results not in context

Bottom line

- ▶ Great collection, poor user interface
- ▶ Failed to leverage unique properties of the collection

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Title: Chicago folio, Riverside, Chicago, Desplaines, and Calumet quadrangles, Illinois-Indiana
Authors: Alden, William C. b. 1871 (William Clinton)
Issue Date: 1902
Publisher: Geological Survey (United States)
Series/Report no.: Geologic Atlas of the United States 81
Description: Chicago folio, Riverside, Chicago, Desplaines, and Calumet quadrangles, Illinois-Indiana
Gov't Doc # : I19.5/1:81
URI: <http://handle.tamu.edu/1969.1/3691>
Appears in Collections: [Geologic Atlas of the United States](#)

Files in This Item:

File	Description	Size	Format
081backcover.tif	300 ppi TIFF of back cover	102425Kb	TIFF View/Open
081frontcover.tif	300 ppi TIFF of front cover	103242Kb	TIFF View/Open
081insidefront.tif	300 ppi TIFF of inside-front cover	101153Kb	TIFF View/Open
081page01.tif	300 ppi TIFF of page 1	105463Kb	TIFF View/Open
081page02.tif	300 ppi TIFF of page 2	105821Kb	TIFF View/Open
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081page28.tif	300 ppi TIFF of page 28	105916Kb	TIFF View/Open
081page29.tif	300 ppi TIFF of page 29	106379Kb	TIFF View/Open
GFolio081.pdf	PDF Version of Geologic Folio 81	166708Kb	Adobe PDF View/Open

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The Solution

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Manakin

▶ Of course :-)

Item View

- ▶ List model caused frustrating user experience
- ▶ Root problem: complex items
- ▶ Exploration causes loss of context

- ▶ Gallery-style thumbnails provide visual overview
- ▶ Lightbox-style previews provides detail in context
- ▶ Full-size JPEG allows for alternate download option

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Pocahontas folio, Virginia-West Virginia

Folio 26, published 1896 Show full item record

Latitude: 37:00:00 N
Longitude: 81:00:00W
Author: Campbell, Marius Robinson, 1858-1940
Gov't Doc number: I19.5/1:26
Published by: Geologic Survey (United States)
In collection: [Geologic Atlas of the United States](#)
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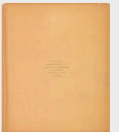









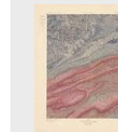



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- ▶ Gallery-style thumbnails provide visual overview
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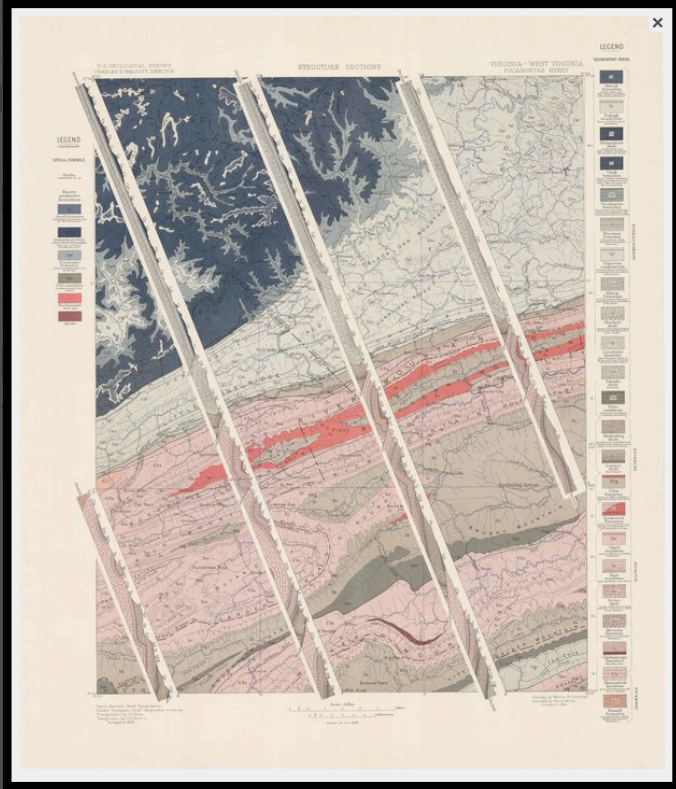
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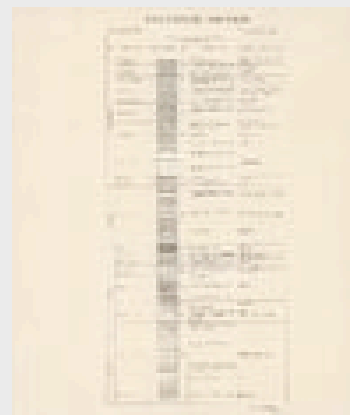


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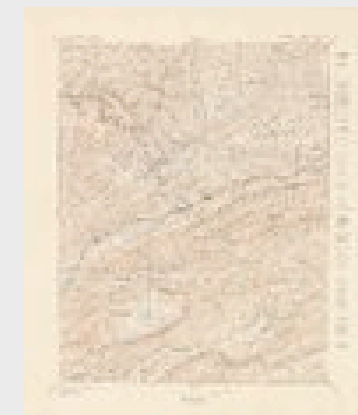
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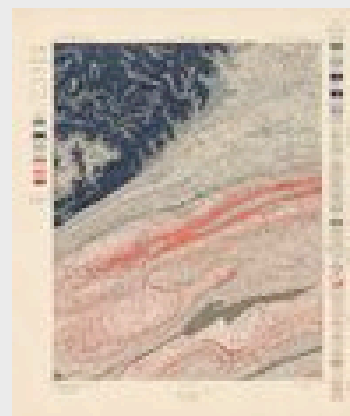
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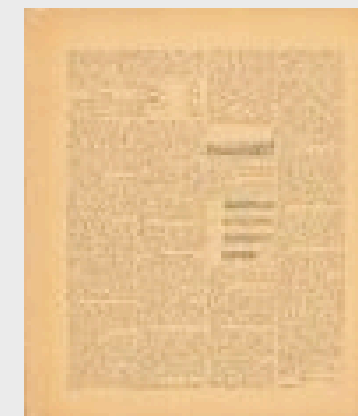
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Manakin's role

Item view

- ▶ Manakin made this easy; merely override the item view template (XSL)
- ▶ Method easily extends to more complex item structures
- ▶ Built-in METS would allow for correlation of images

Collection view

- ▶ Map-based interface obvious choice for context
- ▶ Yahoo! Maps chosen for ease of API and aesthetic qualities
- ▶ Geographic coordinates were available for every item

- ▶ Map places every item into a geographic context
- ▶ Allows user to quickly determine coverage area
- ▶ Provides a visual understanding of the geographic context

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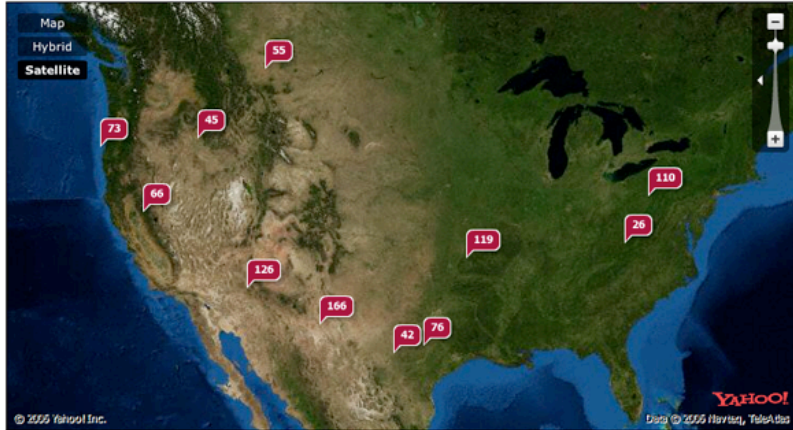
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[El Paso folio, Texas](#)
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- ▶ Map places every item into a geographic context
- ▶ Allows user to quickly determine coverage area
- ▶ Provides a visual understanding of the geographic context



Manakin's role

Collection view

- ▶ Manakin made this easy; merely override the collection view template
- ▶ Example of a customized collection within an existing repository
- ▶ XSL used to write the JavaScript that renders the map

Search view

- ▶ Search results needed to be placed in geographic context, too
- ▶ Searching capabilities should be customized to the collection's needs

- ▶ Search results are plotted on the map for visual placement
- ▶ Search results are listed underneath for more detail
- ▶ Search interface customized for collection's particular needs

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Keywords:

Search Results for Collection: Geologic Atlas of the United States

Previous Page 1

Your query "(Texas)" produced 9 results.

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- [Nueces folio, Texas](#)
Hill, Robert Thomas, 1858-1941 (1897)
- [Austin folio, Texas](#)
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- ▶ Search results are plotted on the map for visual placement
- ▶ Search results are listed underneath for more detail
- ▶ Search interface customized for collection's particular needs



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Search Results for Collection: Geologic Atlas of Texas

Your query "((Texas))" produced 9 results.

[El Paso folio, Texas](#)
Richardson, G. B. (George Burr), 1872-1949 (1909)

[Nueces folio, Texas](#)
Hill, Robert Thomas, 1858-1941 (1897)

[Austin folio, Texas](#)
Hill, Robert Thomas, 1858-1941 (1902)

Manakin's role

Search view

- ▶ Manakin made this easy; merely override the search view template
- ▶ Customized results required overriding the search results template
- ▶ XSL used to renders map, reading Lat/Lon coordinates from DRI

The Result

5

Bottom line

- ▶ Better user experience
- ▶ Improved access
- ▶ Utilizes the unique properties of the collection

Web 2.0

It's a mash-up!

The screenshot shows the Yahoo! Maps gallery interface. At the top, there are navigation links for 'Home', 'Browse Applications', 'Register', and 'Submit Application'. A search bar is located in the top right corner. The main content area is titled 'Maps' and features several featured applications. A red circle highlights the 'Geologic Atlas of the United States' application, which is a mash-up of the U.S. Geological Survey's Geologic Atlas. Other featured applications include 'Parks of New England' Vacation Planner, 'RUNNINGMAP.com', 'Sampling Life in SF via Random Videos', and 'I am Caltrain'. The page also includes a 'BROWSE BY POPULAR TAGS' section with a slider for 'Geo RSS' and a 'BROWSE APPLICATIONS' section with a grid of categories like Music, Flickr, Search, etc. The footer contains copyright information for 2006 Yahoo! Inc. and a 'YAHOO!' logo.

More info

Katherine H. Weimer, Rusty Kimball, Steven Bereyso, Brian Surratt, Adam Mikeal, and Alexey Maslov. "Access and Preservation of Scientific and Cartographic Literature Using an Institutional Repository: USGS's Geologic Atlas of the United States in Space". *Documents to the People*, Vol. 4, No. 4. Winter 2006.

Live site

<http://handle.tamu.edu/1969.1/2490>

Link to “BETA user interface”



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Manakin 

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