A Manakin Case Study
Visualizing geospatial metadata & complex items

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The Setup
Repositories increasingly contain complex items

Metadata needs are moving beyond basic Dublin Core

Traditional approaches fall short
The Collection
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 exists in multiple formats

Needed Qualified Dublin Core

Used DCMI recommendations for values:

- coverage.point: 41:30:00N 87:45:00W
- coverage.box: northlimit=41.75; westlimit=-88; southlimit=41.5; eastlimit=-87.75
The Problem
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
The Solution
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 provide detail in context

Full-size JPEG allows for alternate download option
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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
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
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
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 render a map, reading Lat/Lon coordinates from DRI
The Result
Bottom line

- Better user experience
- Improved access
- Utilizes the unique properties of the collection
Web 2.0
It’s a mash-up!
Live site

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

Link to “BETA user interface”
Manakin
A DSpace Project