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Recommendations from the MWDL Geospatial Discovery Task Force

Sandra McIntyre

Rachel Wittmann

Liz Woolcott
Utah State University

Anna Neatrou

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Take the Geospatial Discovery Survey (again!)

How have things changed in a year?

Take the survey here:

<https://www.surveymonkey.com/r/geospatial2015>

Look at results so far here (and refresh as others answer!):

<https://goo.gl/ol89Rx>

Recommendations from the MWDL Geospatial Discovery Task Force

Update and Resources
DLF Forum 2015

Sandra McIntyre, @sinawava, @MWDigLib
Rachel Wittmann, @rachelwittmann
Liz Woolcott, @lizwoolcott
Anna Neatrour, @annaneat

Overview

1. Geospatial Discovery Task Force process and findings
2. Implementation experiences
3. Converting legacy collections
4. Integration with regional and national portals
5. Moving forward

Geospatial Discovery Task Force


Process and findings

192 partners with non-standard metadata

- Which controlled vocabulary? National values only or some local values?
- How to avoid ambiguity in placenames?
- Which format for latitude/longitude coordinates?
- Mapped to which Dublin Core field?
- For multiple locations, one field or multiple fields?

Documenting issues

Report by
Dorotea Szkolar
MWDL metadata intern

The image shows the cover of a report. The title is written in a bold, black, sans-serif font on a light blue rectangular background. Below the title, the author and date information are listed in a smaller, black, sans-serif font on a white background. The entire cover is tilted slightly to the right.

**Recommendations for Geospatial Metadata
Standards for Digital Collections in the
Mountain West Digital Library**

Report prepared for the
Utah Academic Library Consortium
Digitization Committee

By Dorotea V. Szkolar
MWDL Intern

8/01/2012

Use Cases

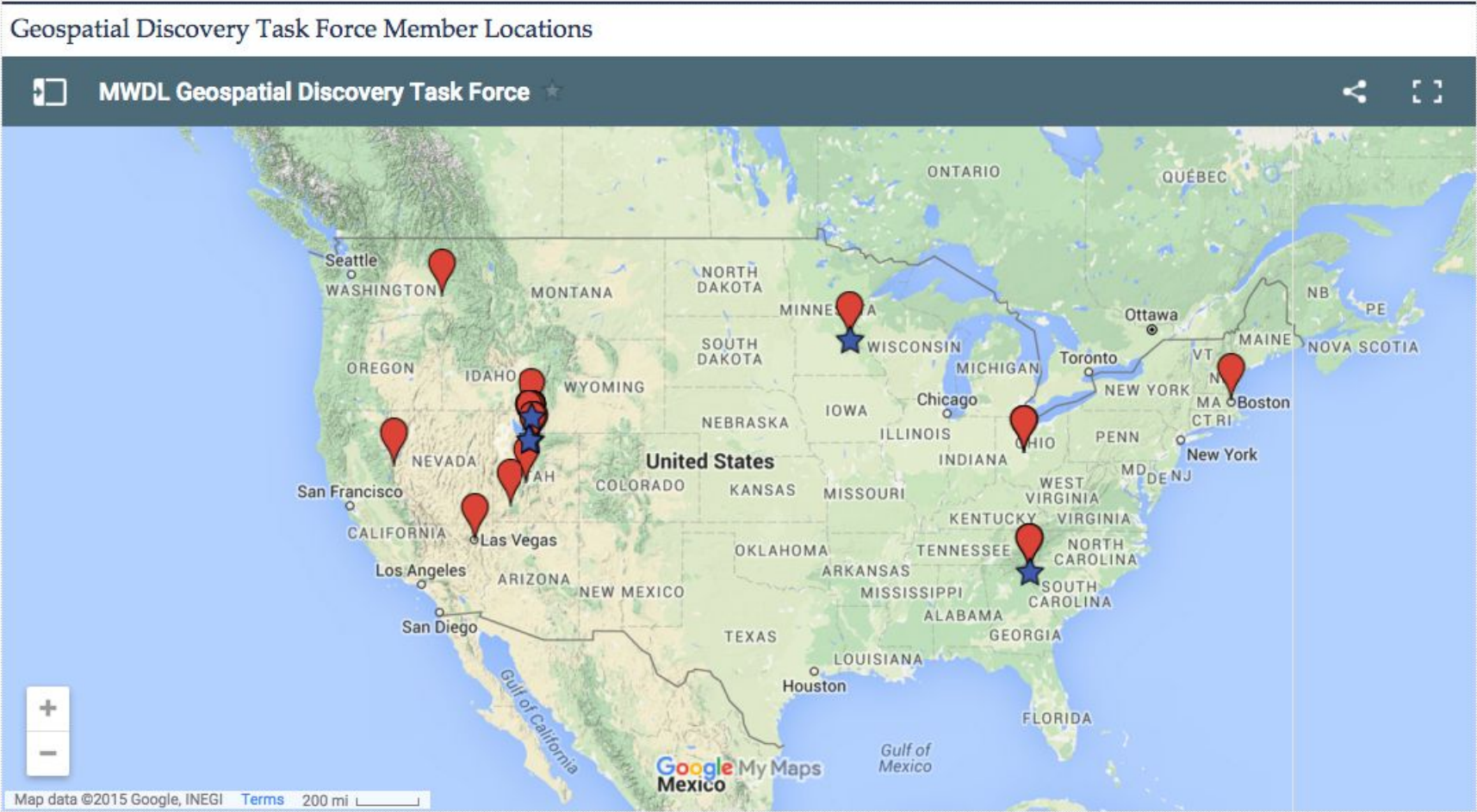
- “I just want my metadata harvested and showing up on DPLA’s map.”
- “I want to create a walking tour of a buildings collection (historic homes of 1925) and need different points expressing street level locations (points + photo).”
- “I’m interested in putting in city, state, town information and I want to get started with linked data.”
- “I want to display county outlines instead of just a point in the middle of the county.”

Task Force Charge

1. Identify existing geospatial metadata practices
2. Develop guidelines for standardizing
3. Creating map-based search interfaces
4. Identify and share tools

<https://sites.google.com/site/mwdlgeospatial/>

Task Force Members



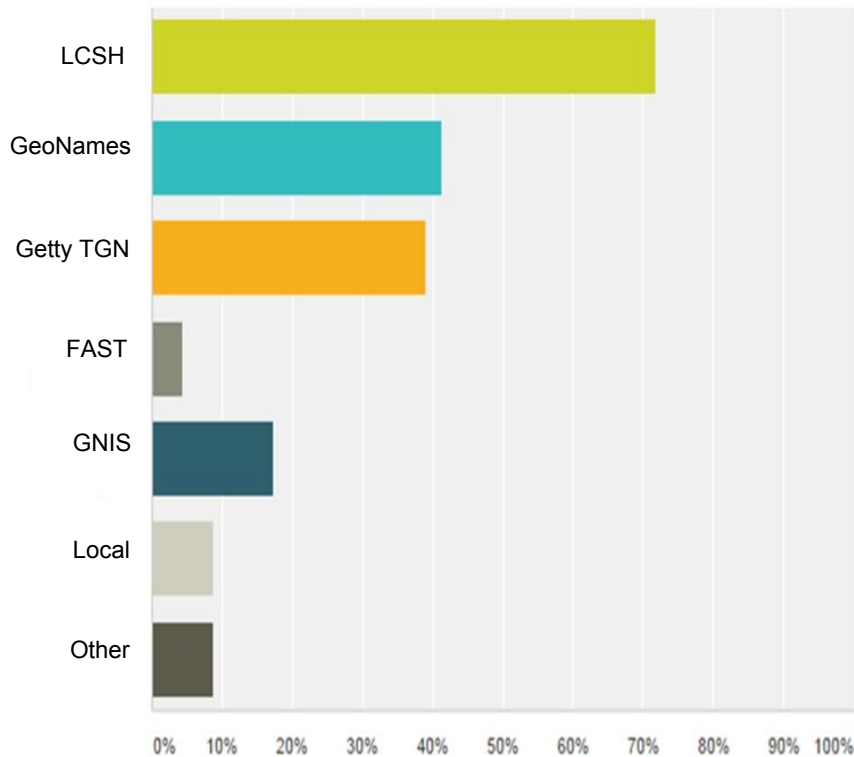
Task Force Process

Phases with sub-groups working on different topics

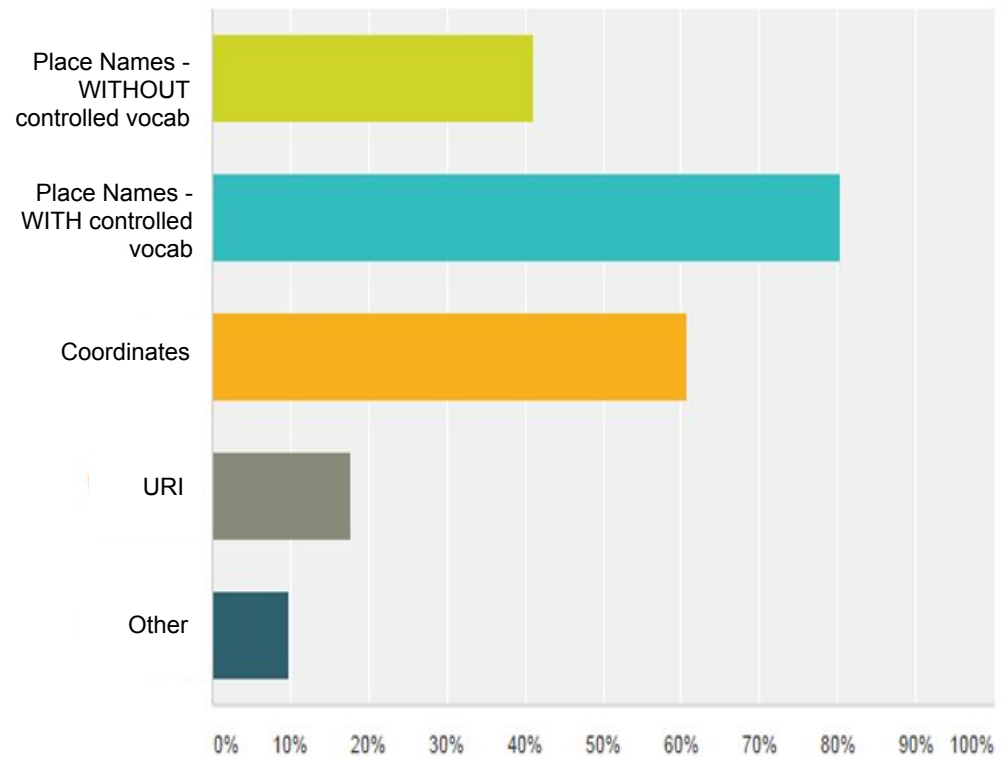
1. Assessment
 - Current practices of MWDL partners
 - Options for map interfaces
 - “Low-hanging fruit” possibilities
2. Options for regional standards
 - Controlled vocabulary options
 - Coordinate data options
3. Recommendations and instructions

Survey at DLF Forum 2014

If you use a controlled vocabulary for geospatial metadata, what do you use?



How are you expressing your geospatial metadata?



Complete results: <https://www.surveymonkey.com/results/SM-Z9LV85BL/>

Survey redux

How have things changed in a year?

Please respond to this year's survey here:

<https://www.surveymonkey.com/r/geospatial2015>

Look at results so far here
(and refresh as others answer!):

<https://goo.gl/ol89Rx>

Best Practices in Geospatial Metadata - DLF Forum 2015

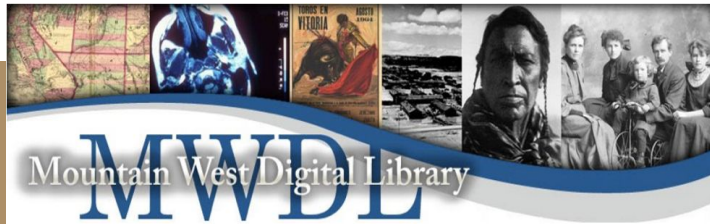
1. How are you expressing your geospatial metadata? Check all that apply.

- Place Names - no controlled vocabulary
- Place Names with a controlled vocabulary
- Coordinate Points
- URI (Uniform Resource Identifier)
- Other (please specify)

2. What aspects of geospatial metadata controlled vocabularies are most important to you? Check all that apply.

- Natural Features
- Historic Place Names
- Coordinate Data
- Linked Data support
- Geographic Hierarchy
-

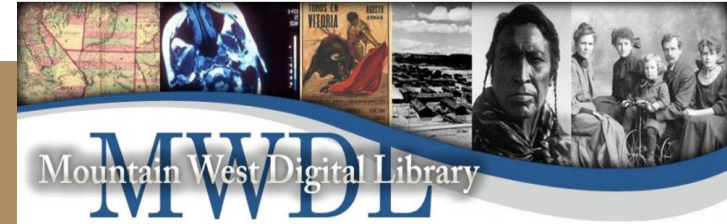
Deliverables: Final Report and Tutorial



Best Practices
for
Geospatial Metadata Creation
for
MWDL Cultural Heritage
Digital Repositories

Final Report of the
Mountain West Digital Library Geospatial Discovery Task Force
July 2015

Final Report : <https://goo.gl/vTrmzM>



INSTRUCTIONS FOR ASSIGNING GEOSPATIAL
METADATA USING
GeoNames.org

Developed by the
Mountain West Digital Library Geospatial Discovery Task Force
July 2015

GeoNames Tutorial: <https://goo.gl/vpX7mi>

Recommendations: GeoNames

- 1.1. GeoNames is the preferred geographic database from which to derive controlled vocabulary terms, uniform resource identifiers (URI)s, and latitude and longitude information for metadata creation.

Recommendations: Format

1.1.1 The preferred format for geospatial metadata will follow this pattern:

place name hierarchy, URI, Latitude, Longitude

with the place name hierarchy being the minimal accepted format.

Recommendations: Format Examples

Examples:

Minimal accepted format:

Aurora (historical), Mineral County, Nevada, United States

Highly recommended format:

Aurora (historical), Mineral County, Nevada, United States, <http://sws.geonames.org/5499519/>

Additional accepted format:

Aurora (historical), Mineral County, Nevada, United States, <http://sws.geonames.org/5499519/>, 38.28714, -118.9007

Recommendations: Place names and Lat/Long

1.1.2 Place name hierarchy should be presented from smallest to largest, with places spelled out, separated by commas.

1.1.3 Latitude-longitude coordinates should be expressed as decimal degrees, without directional letters (“N”, “W”, etc.), and separated by commas.

Example:

38.28714, -118.9007

Recommendations: Multiple places

1.1.4 When referring to more than one place, place semi-colons only between each unique place while retaining the commas between the elements that describe each place.

Example:

Aurora (historical), Mineral County, Nevada, United States, <http://sws.geonames.org/5499519/>; Phoenix, Maricopa County, Arizona, United States, <http://sws.geonames.org/5308655/>

Recommendations: Additional geospatial

1.1.5 Additional geospatial information (such as street addresses) or metadata that needs to be entered in a different order than what is prescribed in 1.1.1 should be placed in unmapped metadata fields.

Recommendations: Field mapping

1.2 A metadata value in a **field mapped to the spatial coverage** refinement (dcterms:spatial) is recommended for all records harvested by MWDL. The mapping to dcterms:spatial can be done at the collection level. The OAI provider for the repository hosting the collection should **support provision of qualified Dublin Core.**

Recommendations: New collections

1.3 A metadata value in a field mapped to the spatial coverage refinement (dcterms:spatial) is **highly recommended for all records in new collections** harvested by MWDL.

Recommendations: Legacy data

1.4 Where converting legacy data may be too difficult, partners may add an additional separate field mapped to the Dublin Core term spatial (dcterms:spatial) with basic, minimal geospatial metadata **at least at county or county equivalent** (e.g., parish, borough, shire) level, in accordance with GeoNames.

Recommendations: Conformance

1.5 Since MWDL contributors may need to use varied controlled vocabularies, it is recommended that **conformance to these standards be highly recommended but not enforced**. Failure to adhere to these standards will not lead to collections being excluded from harvest. However, MWDL and DPLA may not be able to interpret spatial information that is expressed outside the parameters of these standards.

Recommendations: ISO compliance

1.6 All standards and practices adopted by the metadata review board should be compliant with applicable ISO standards for geographic metadata.

Recommendations for Future

- **Legacy Data:** Create actionable plans to deal with legacy geospatial data including:
 - Describe find-and-replace scenarios that may be useful.
 - Look at the top five strategies used by MWDL partners to assign geospatial metadata and estimate what would need to be done to convert legacy data.
- **Regional Gazetteer:** Have a subgroup look at adopting/developing a gazetteer of regional place names that are missing from international controlled vocabularies.
- **Points and Boxes:** Review the formatting and syntax of Points and Boxes, particularly in regards to the DCMI Box/Point Encoding Schemes.
- **Map Interfaces:** Look further into GeoJSON vs. KML for presenting spatial data on map interfaces.

Limitations at this time

- Current systems used by MWDL partners do not support linked data
- In an ideal world, we would use the URI for the place only, in RDF
- This is encouraging MWDL partners to use a Linked Data compatible controlled vocabulary
- Hope to take fuller advantage of the recommendations at a later date

Implementation Experiences

- Marriott Library, University of Utah
- Merrill-Cazier Library, Utah State University
- Open Parks Network, Clemson University

University of Utah and Utah State University Implementation

New University of Utah collections with GeoNames information:

- Interviews with Jews In Utah
- Alf Engen Papers
- Everett Ruess Family Papers
- Nelson Higgins Papers
- Thomas Jefferson O'Brien Journals
- and more!

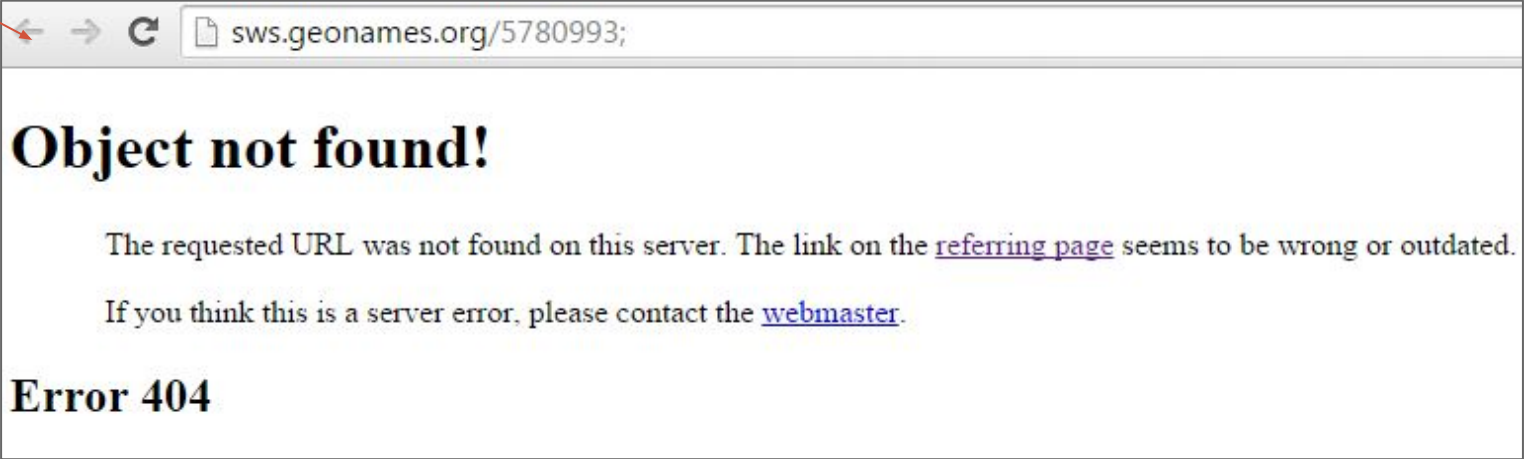
Utah State University collection:

The screenshot shows the 'Historic Postcards of Utah' collection page on the Utah State University Digital Collections website. The page features a navigation bar with links to 'USU Library Home', 'Digital Collections Home', 'Historic Postcards of Utah Home', and 'Browse the Historic Postcards of Utah Collection'. A search bar is located below the navigation bar. The main content area includes a large image of a vintage postcard titled 'UTAH the Beehive State' showing a map of the state and the Salt Lake Temple. Below the image is an 'About this collection' section with text describing the collection's scope and sources. To the right, there is a 'Recent Additions' section displaying a grid of six postcard thumbnails with their respective titles: 'Postcard of Utah State Capitol at night, Salt Lake City, UT', 'Postcard of Salt Lake Temple', 'Postcard of Eagle Gate looking towards Capitol building, Salt Lake City, UT', 'Postcard of Corridor and Main Stairways, Utah State Capitol, Salt Lake City, UT', 'Postcard of Brighton, Big Cottonwood Canyon, UT', and 'Postcard of Tabernacle Choir and inside of Tabernacle'. The footer of the page includes a 'Home About Contact Us' menu and a 'Powered by CONTENTdm®' logo.

CONTENTdm Implementation Issues

Parsing issues with CONTENTdm and links with semicolons

Spatial Coverage Salt Lake City, Salt Lake County, Utah, United States, <http://sws.geonames.org/5780993;>



The screenshot shows a web browser window with the address bar containing the URL `sws.geonames.org/5780993;`. The main content area displays a 404 error message. A red arrow points from the semicolon in the URL of the text block above to the semicolon in the browser's address bar.

Object not found!

The requested URL was not found on this server. The link on the [referring page](#) seems to be wrong or outdated.

If you think this is a server error, please contact the [webmaster](#).

Error 404

CONTENTdm Faceting Issues

- salt lake city, salt lake county, utah, united states, <http://sws.geonames.org/5780993>; russia, <http://sws.geonames.org/2017370> (3)
- salt lake city, salt lake county, utah, united states, <http://sws.geonames.org/5780993>; new york city, new york, united states, <http://sws.geonames.org/512858> (2)
- salt lake city, salt lake county, utah, united states, <http://sws.geonames.org/5780993>; poland, <http://sws.geonames.org/798544> (2)
- salt lake city, salt lake county, utah, united states, <http://sws.geonames.org/5780993>; sandy, salt lake county, utah, united states, <http://sws.geonames.org/578106> (2)



You've searched: Univ of Utah - Interviews with Jews in Utah

Spatial Coverage: salt lake city, salt lake county, utah, united states, <http://sws.geonames.org/5780993> ✖ (and)

Spatial Coverage: salt lake city, salt lake county, utah, united states, <http://sws.geonames.org/5780993>; russia, <http://sws.geonames.org/2017370> ✖

Your search retrieved no results.

- Check the spelling
- Try different or more general key words
- Try the advanced search



open parks
network

Using GeoNames and
CollectiveAccess

Robust location capabilities

Obscure Locations



Boy reading sign, Newfound Gap, Great Smoky Mountains, National Park, North Carolina, 1957



Save Cancel Delete

Geographic Location

Place Name
Yellowstone National Park, (park), Park County, Wy

Yellowstone National Park
(park), Park County, Wyoming
[44.59644,-110.5472]

Map Satellite

Google

- GeoNames plugin
- Easily customizable
- Lag in retrieving newly created locations

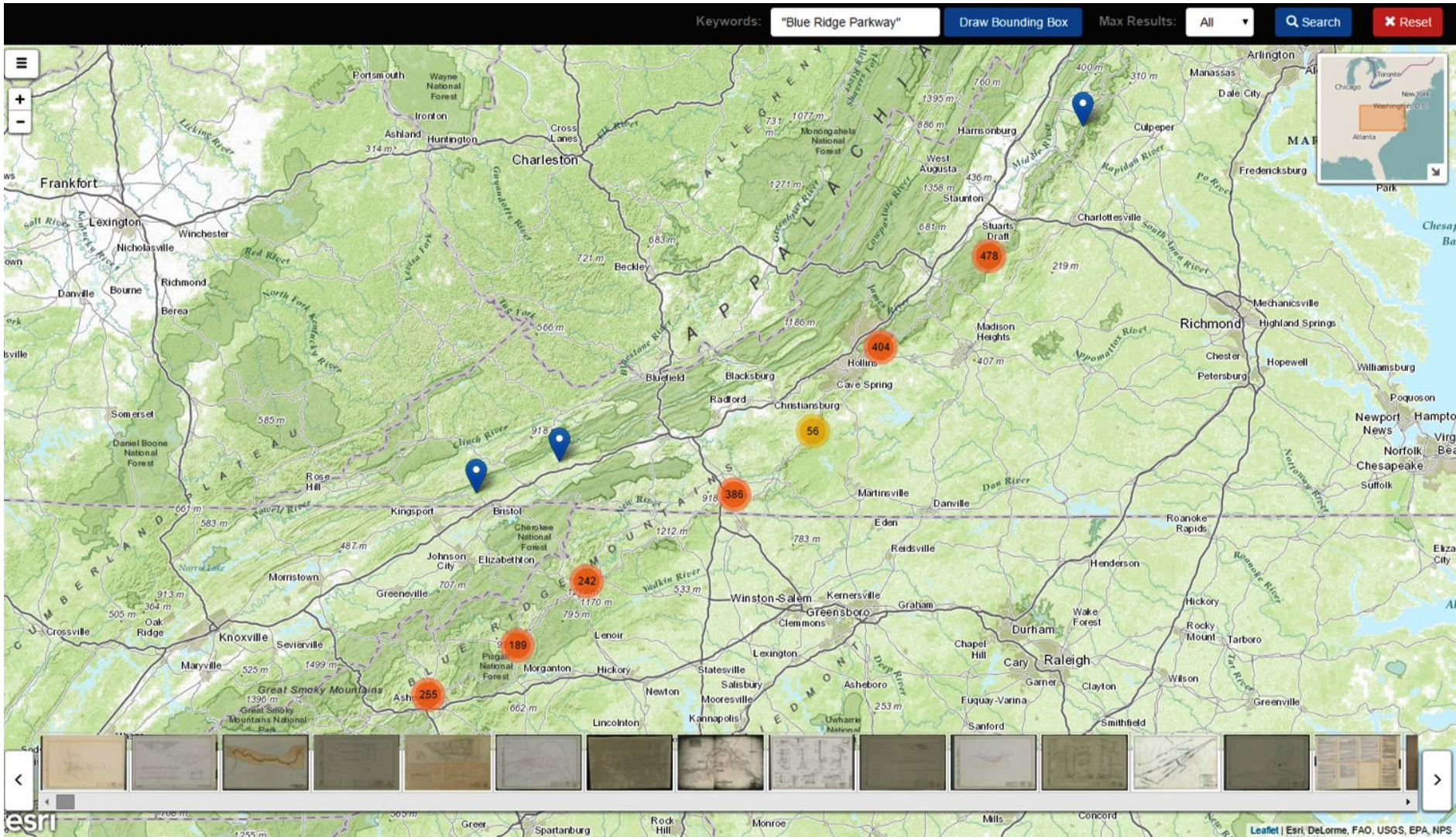
GeoNames elements

name, adminName2, adminName1, countryName, lat, lng, adminCode1, geonameId

GeoNames field editor label display template

```
^name^, (^fcodeName^), ^adminName2^, ^adminName1^, ^countryName^;  
[^lat^,^lng^]
```

Blue Ridge Parkway Engineering Plans



Converting Legacy Collections

Developing batch strategies

Conversion at Marriott Library

Make spatial data in collections more consistent

- If older collections are in LCSH, make it good LSCH
- Use GeoNames consistently moving forward
- If some individual collections could benefit from having GeoNames data, explore conversion
- Explore reconciliation for Geonames in the future

Conversion at USU Library

- All collections going forward will be assigned geospatial metadata according to the new standards
- Legacy collections will be upgraded one by one as part of a larger effort to bring legacy collection metadata into compliance. Tactics will include:
 - Find and replace wherever possible
 - New geospatial assignments
 - Developing local “cheat sheet” for common locations



Integration into regional and national portals



Discoverability in search portals

MWDL Interface

Title: Rose Leibowitz Arnovitz, Interviews with Jews in Utah, Accn 998

Alternative Title: Accn 998, Interviews with Jews in Utah, Rose Leibowitz Arnovitz

Creator: Arnovitz, Rose Leibowitz, 1908-1997

Contributor: Kelen, Leslie G., 1949-; Oral History Institute

Creation Date: 1983-03-16

Publisher: Digitized by J. Willard Marriott Library, University of Utah

Abstract: Interviewed by Leslie Kelen, Rose Leibowitz (b. 1908) talks about her parents' lives in Rumania, their coming to America, her father's experiences in the egg and grocery businesses, her childhood, and Jewish rituals practiced in the home. She also remembers her involvement in various organizations in Salt Lake City, including the Talmud Torah ladies, B'nai B'rith, the Traveler's Aid Society, United Way, the Welfare Fund drive, and the Jewish Relief Society (which became the Jewish Family Service). Other topics covered include the differences between the B'nai Israel and Montefiore congregations, the social "clique-iness" of the women in the Jewish community, Rabbi Cardin, the high holy days, some of the people who were "bulwarks" of the Montefiore Congregation, and Zionism. She also recalls some of the local scandals, the anti-Semitic situation in Salt Lake schools, and the younger generation of Jewish people moving away from Salt Lake. Finally, she speaks of her involvement in Hadassah, Youth Alleyah, fund raising, blue box luncheons, USO, the Jewish Relief Society, and help Jewish soldiers during World War II. 177 pages.

Description: Transcript (177 pages) of interview by Leslie Kelen with Rose Leibowitz on March 16, 1982 for the Interviews with Jews in Utah Project.;

Subjects: Jews, American--Utah--Interviews; Arnovitz, Rose Leibowitz, 1908-1997--Interviews;

Antisemitism--Aspects--Judaism

Type: text

Format: app

Extent: 177 pages;

Language: English

Spatial Coverage: Salt Lake City, Salt Lake County, Utah, United States, <http://sws.geonames.org/5780993> ; România, <http://sws.geonames.org/798549>

Spatial Coverage: Salt Lake City, Salt Lake County, Utah, United States, <http://sws.geonames.org/5780993> ; România, <http://sws.geonames.org/798549>

Rights: Digital Image © 2015 University of Utah. All Rights Reserved. Contact the J. Willard Marriott Library Manuscripts Division for use and restrictions. 801-585-3082

Digital Collection: Interviews with Jews in Utah

Related Resources: Is part of: Interviews with Jews in Utah collection, 1982-1988, <http://archiveswest.orbiscascade.org/ark:/80444/xv70657/>

MWDL Pass-through of values

Include	Exclude	Spatial Coverage
<input type="checkbox"/>	<input type="checkbox"/>	Salt Lake City, Salt Lake County, Utah, United States, http://sws.geonames.org/5780993/ (42)
<input type="checkbox"/>	<input type="checkbox"/>	Russia, http://sws.geonames.org/2017370 (4)
<input type="checkbox"/>	<input type="checkbox"/>	Poland, http://sws.geonames.org/798544 (3)
<input type="checkbox"/>	<input type="checkbox"/>	Germany, http://sws.geonames.org/2921044 (2)
<input type="checkbox"/>	<input type="checkbox"/>	New York City, New York, United States, http://sws.geonames.org/5128581/ (2)
<input type="checkbox"/>	<input type="checkbox"/>	Sandy, Salt Lake County, Utah, United States, http://sws.geonames.org/5781061/ (2)
<input type="checkbox"/>	<input type="checkbox"/>	Brooklyn, Kings County, New York, United States, http://sws.geonames.org/5110302 (1)
<input type="checkbox"/>	<input type="checkbox"/>	Utah, United States, http://sws.geonames.org/5549030/ (1)
<input type="checkbox"/>	<input type="checkbox"/>	Pennsylvania, United States, http://sws.geonames.org/6254927 (1)
<input type="checkbox"/>	<input type="checkbox"/>	România, http://sws.geonames.org/798549 (1)
<input type="checkbox"/>	<input type="checkbox"/>	Latvia, http://sws.geonames.org/458258/ (1)
<input type="checkbox"/>	<input type="checkbox"/>	Magna, Salt Lake County, Utah, United States, http://sws.geonames.org/5777793 (1)
<input type="checkbox"/>	<input type="checkbox"/>	Ogden, Weber County, Utah, United States, http://sws.geonames.org/5779206/ (1)
<input type="checkbox"/>	<input type="checkbox"/>	Nephi, Juab County, Utah, United States, http://sws.geonames.org/5543853 (1)

MWDL facets

SPATIAL COVERAGE

Salt Lake City, Salt Lake County,
Utah, United States,
<http://sws.geonames.org/5780993/>
(42)

Russia,
<http://sws.geonames.org/2017370>
(4)

Poland,
<http://sws.geonames.org/798544>
(3)

New York City, New York, United
States,
<http://sws.geonames.org/5128581/>
(2)

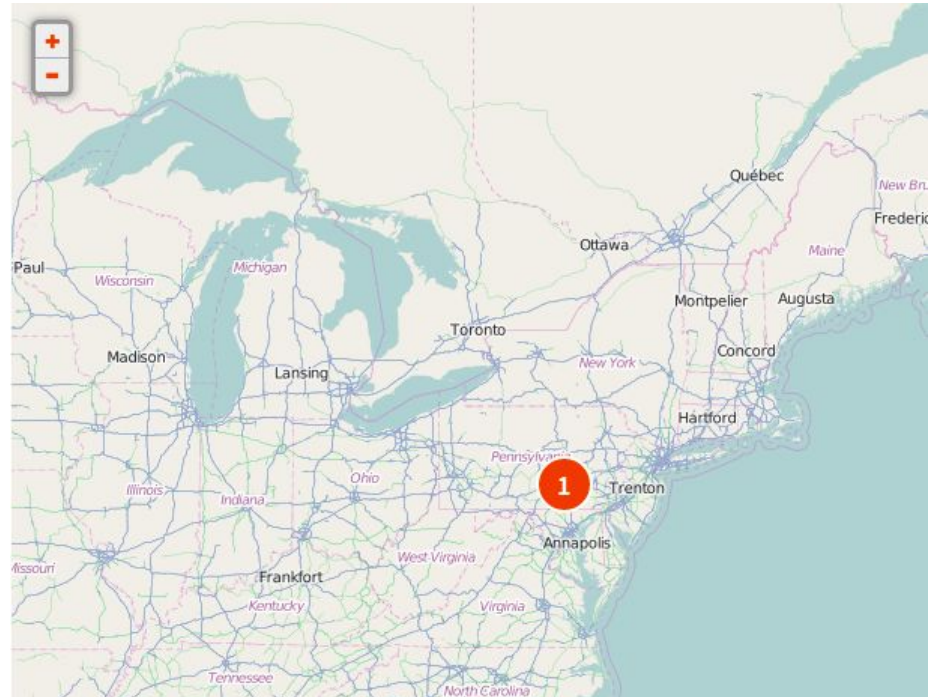
Germany,
<http://sws.geonames.org/2921044>
(2)

More options ▾

Same awkwardness with
lengthy facets as in DAMS

DPLA

DPLA hasn't activated its new plan yet but will be enriching geographic data using GeoNames and able to take advantage of new MWDL standards.



Moving Forward

Promoting best practices and integrating with other standards

MWDL Metadata Standards

1. Approval from entire MWDL Digitization Committee
2. Reconvening MWDL Metadata Task Force for integration into *MWDL Dublin Core Application Profile*

MWDL Staff and Committees

1. Training
2. Metadata auditing changes for new collections
3. Conversion assistance for legacy collections

Resources

Handout: <https://goo.gl/YGx4q7>

Mountain West Digital Library

Geospatial Discovery Task Force

Questions?

sandra.mcintyre@utah.edu

<https://sites.google.com/site/mwdlgeospatial>

Resources

How to use GeoNames:

<https://goo.gl/vpX7mi>

Quick Guide for Creating Geospatial Metadata

Follow this pattern:

place name hierarchy, URI, latitude, longitude

Examples:

Highly recommended format:

Aurora (historical), Mineral County, Nevada, United States,
<http://sws.geonames.org/5499519/>

Minimal accepted format:

Aurora (historical), Mineral County, Nevada, United States

Additional accepted format:

Aurora (historical), Mineral County, Nevada, United States,
<http://sws.geonames.org/5499519/>, 38.28714, -118.9007

Resources: Posters

Geospatial Recommendations


for the Spatially Challenged:
Findings of the MWDL Geospatial Discovery Task Force

Digital Library Federation Forum, October 2015


Anna Neatour
University of Utah
Liz Woolcott
Utah State University

The Problem

Swimming in a sea of standards....



What will guide us????



Mountain West Digital Library
Geospatial Discovery Task Force

Charge

- Identify existing geospatial metadata practices used by Mountain West Digital Library (MWDL) partners and other digital libraries, as well as other disciplines and organizations.
- Develop guidelines for MWDL partners to use in standardizing metadata practices to optimize geographically-based discovery of digital resources.
- Create the following deliverables:
 - An online bibliography of resources
 - Guidelines for MWDL geospatial metadata practices
 - Recommendations & instructions for creating map-based search interfaces or search functionality
 - Final report on the task force's activities, findings, and recommendations

Considerations

Mountain West Digital Library

- Multistate regional collaborative, with 191 partners from 6 states
- Partners include universities, colleges, public libraries, museums, historical societies, and government agencies
- Harvesting from 23 repositories, with 9 software platforms
- Records available for harvest: 965,000 records from 797 collections
- History of collaboration around standards
- Metadata practices for partners guided by the MWDL Dublin Core Application Profile

The Findings

Preferred Formats

preferred format
Place names with URI
Amara (historical), Mineral County, Nevada, United States. <http://sws.geonames.org/599315/>

recommended minimum format
Place names
Amara (historical), Mineral County, Nevada, United States

additional accepted format
Place names, URI, Latitude, Longitude
Amara (historical), Mineral County, Nevada, United States. <http://sws.geonames.org/599315/>, 38.39714,-118.9067


More than one place?
Separate distinct places with semi-colon
Amara (historical), Mineral County, Nevada, United States. <http://sws.geonames.org/599315/>; Phoenix, Maricopa County, Arizona, United States. <http://sws.geonames.org/5308655/>

Recommendations

- Use GeoNames.org as the controlled vocabulary
- Express place names in order from smallest to largest, with commas separating values in the hierarchy
- Longitude and Latitude should be expressed as decimal degrees
- Geospatial fields should be mapped to deterministic

Here be Monsters!
(Don't do this)

Don't place semicolons within a value referring to a single place
Phoenix : Maricopa County ; Arizona ; United States ; <http://sws.geonames.org/5308655>



The Process

- Collaborative, Transparent Process**
 - See public website: <http://sites.google.com/site/mwdlgeospatial>
 - See public website: <http://sites.google.com/site/mwdlgeospatial>
- Open Membership**
 - Email list anyone could join, representatives included:
 - MWDL partners
 - Members from outside MWDL network
- Large Group + Small Task Forces**
 - Goals articulated by central group
 - Areas of investigation identified; assigned to smaller task forces of 3-6 people
 - Use iterative process with multiple phases
 - Shared reports and recommendations with larger group and MWDL network
- Consult with DPLA**
 - Develop recommendations and check for conformance with DPLA MAP
 - Maintain awareness of DPLA practices
- Synthesize Findings**
 - Final report produced by taskforce leaders, in consultation with the entire group

Vocabularies Evaluated

Vocabulary Evaluation	Library of Congress Subject Headings	Getty Thesaurus of Geographic Names	Geo-Names	Geographic Names Information System
Natural Features	Weak	Moderate	Moderate	Moderate
Historical Place Names	Weak	Strong	Strong	Strong
Coordinate Data	Moderate	Strong	Strong	Weak
Geographical Hierarchy	Weak	Strong	Strong	Weak
Linked Data	Weak	Strong	Strong	Weak
Depth/Breadth	Weak	Moderate	Strong	Weak
Responsiveness	Moderate	Strong	Moderate	Moderate

* Evaluation based on strengths and weaknesses on three point scale ranging from weak to strong.


References

MWDL Geospatial Discovery Task Force Documentation

- Final Report: <https://goo.gl/T1mz7M>
- GeoNames Instructions: <https://goo.gl/3pX7m>
- Website: <http://sites.google.com/site/mwdlgeospatial>

Acknowledgements

This poster is an overview of the work of the many task force members of the MWDL Geospatial Discovery Task Force, and would not have been possible without their contributions. Image source: from www.flickr.com/photos/... Design elements contributed by Mikal Skaner.



Metadata Mountains National Park Trail Map

Open Parks Network Metadata Methodology

Since 2010, Clemson University and the National Park Service (NPS) have collaborated on the Open Parks Network (OPN), an IMLS-funded project that's resulted in the digitization of over 350,000 cultural heritage objects and 1.5 million pages of gray literature housed in the libraries, museums, and archives of our nation's parks, historic sites, and other protected areas—all made freely available at <http://openparksnetwork.org>.

More than 20 national parks and other protected sites are represented in this diverse collection, as well as 2 state park systems and 3 university libraries. The metadata schemas, management systems, and levels of descriptive information available for collection items vary widely from organization to organization. The trails that traverse Metadata Mountains National Park symbolize this variance in supplied metadata.

Rough Terrain:
The OPN team faces many unique challenges in ensuring that adequate metadata is available for park materials, even though all NPS units are provided with the Interior Collections Management System (ICMS) software to manage, accession, and document archival and museum collections. Those challenges include the following:

- Extensive backlog of items for metadata application.
- Large collections averaging 5,000 to 20,000 items, with highest collection peaking at 140,000.
- Metadata funding and time constraints.
- Working remotely with NPS sites to coordinate retrieval of existing metadata from ICMS, an effort that includes crosswalking their data to the OPN schema and normalizing the data to meet accepted cataloging standards.
- ICMS metadata does not include all required OPN elements, including item-level titles, subject terms, and geographic locations.
- The amount of item-level ICMS metadata varies greatly from park to park, collection to collection, and even item to item.

Climbing the Mountain:
Clemson implemented CollectiveAccess, an open-source solution, for metadata management and application. CollectiveAccess allows our team of student metadata technicians to batch apply metadata elements, including title, geographic location, and subject terms.

- Level of OPN metadata application based on the park-supplied metadata and content of items.
- Implement tactics from "more product, less process" to metadata application on a series-level when needed.

Trail Descriptions:
The trails included in this map represent a series of digital items with varying amounts of park-supplied metadata. The metadata application process provided by Clemson University Libraries depends on the scenario. A collection could be comprised of multiple series or just one, depending on the material. See "Trail Key."

Trail Amenities:
Each trail has a recurring set of metadata elements (title, subject terms, etc.), see "Legend" for full list of icon representations. The more frequent occurrence of such icons indicates more item-level metadata, thus more labor intensive.

Typical scenarios include:

- Robust item-level metadata provided via ICMS export. This includes descriptions, dates created, and creators.
- Series-level metadata, basic series information, including: date range, subject terms, format, and general location.
- Only metadata, items minimally processed by the park archives.

*Note: The list of metadata elements included in the legend does not represent all elements used in the OPN schema, only the most used in item-level description.



Legend*

- Contributing Park
- High-Statement
- Title
- Subject Terms - LCSH
- Date Created
- Creator
- Description - Park
- Location - GeoNames

Trail Key

- Easy: Minimal park-supplied metadata
- Moderate: Some park-supplied metadata
- Difficult: Robust park-supplied metadata
- Expert-level: Robust Only: Adding locations to GeoNames

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Poster Session today at 4:00

Contact us

- ❑ Sandra McIntyre
sandra.mcintyre@utah.edu
- ❑ Liz Woolcott
liz.woolcott@usu.edu
- ❑ Anna Neatrour
anna.neatrour@utah.edu
- ❑ Rachel Wittmann
rwittma@clemson.edu

Today's survey results:
<https://goo.gl/ol89Rx>

Check the Community Notes later today for a side-by-side comparison with last year's survey results!

<https://goo.gl/C4D2X8>