Western Name Authority File

An Open Data Approach to Digital Collections Authority Control

NISO

Open Data Projects Virtual Conference
June 13, 2018

Anna Neatrour (@annaneat)
Jeremy Myntti (@jmyntti)

J. Willard Marriott Library
THE UNIVERSITY OF UTAH

Metadata aggregation problems

- Savage, C. R. (Charles Roscoe), 1832-1909
- Savage, C.R. (Charles Roscoe),1832-1909
- Savage, C.R.(Charles Roscoe),1832-1909
- Savage, C.R. (Charles Roscoe)
- Savage, Charles R.
- C. R. Savage (Charles Roscoe Savage and George Ottinger)
- Charles R. Savage
- Savage, Charles Roscoe
- C. R. (Charles Roscoe) Savage, photographer
- Savage, C. R.
- Charles R.
- Savage

Charles R. Savage, perplexed by his many name variants.

Charles R. Savage
Classified Photographs
Utah Department of Heritage and Arts
https://collections.lib.utah.edu/details?id=432964

More metadata, more metadata problems

- Vendor based DAMS often not offering good authority control solutions
- Use LC Authorities as best we can
- Hosting partner collections = less control over cataloging practices
- Libraries often consult additional regional names sources
  - Daughters of Utah Pioneers name index:

    http://www.dupinternational.org/pioneer_index.php

Last Name	Given Name	Maiden Name	Birth Date	Death Date
Savage	Adelaide	Cooper	28 Nov 1852	23 May 1935
Savage	Alma		14 Oct 1859	9 Jun 1943
Savage	Annie	Adkins	6 Feb 1836	30 Nov 1893
Savage	Charles Frederick		21 Feb 1868	1951
Savage	Charles Roscoe		16 Aug 1832	3 Feb 1909
Savage	Cornelius		4 Aug 1861	2 Jun 1941
Savage	David Leonard		25 Jul 1810	26 Apr 1886
Savage	Eliseman (Lisiman)	Palmer	10 Sep 1806	14 Nov 1884
Savage	Ellen	Fenn	14 Feb 1843	7 Apr 1925

IMLS Grant for regional authority control

1. Investigating data models to express local/regional name authority data using linked data standards
2. Evaluation of tools used for creating, maintaining, and making this data available
3. Pilot implementation using the selected tool(s)
4. Assessment of how this type of authority data can improve digital collection metadata on a local, regional, and national level

The Military on campus, University of Utah [09]
University Archival Photographs (P0305)
J. Willard Marriott Library, University of Utah
https://collections.lib.utah.edu/details?id=980705

Libraries Working Together

Project Partners

- Brigham Young University
- Oregon Digital (Univ. of Oregon and Oregon State Univ.)
- University of Nevada, Reno
- University of Utah
- University of Denver
- Utah Department of Heritage and Arts
- Utah State Archives
- Utah State University

American Hotel, Salt Lake City, back of carte-de-visite
Multimedia Archives Photographs
J. Willard Marriott Library, University of Utah
https://collections.lib.utah.edu/details?id=983816

Libraries Working Together

Data Models: Collaborative Investigation

Data to capture
- Preferred form of name
- Alternate forms of name
- Local authority source
- Institution holdings
- Relationship information

Data Models Explored
- SKOS
- OWL
- BIBFRAME Authorities/Agent/Role
- EAC-CPF

Japanese in Utah
Masaoka, Mrs. Mike; Masaoka, Mike M.; Mukaeda, Katsuma
Peoples of Utah
Utah Department of Heritage and Arts
https://collections.lib.utah.edu/details?id=508152

Encoded Archival Context - Corporate Bodies, Persons, and Families

- EAC-CPF http://eac.staatsbibliothek-berlin.de
- SNAC (Social Networks and Archival Context) http://socialarchive.iath.virginia.edu/index.html
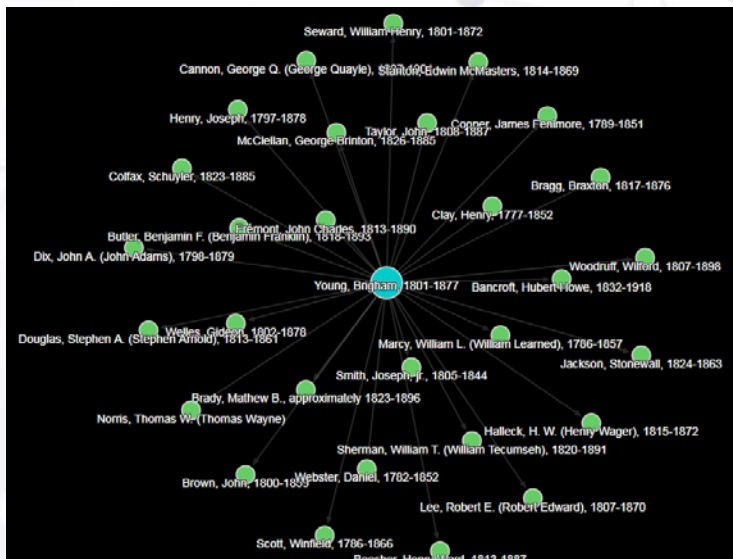
Brigham Young portrait
Extension, Enterprise, and Education:
the Legacy of Co-operatives and Cooperation in Utah
Utah State University
http://digital.lib.usu.edu/cdm/ref/collection/coops/id/1708

Metadata wrangling (data submitted)

{"@id":http://opaquenamespace.org/ns/people/SavageCarlton",
    "@type": "skos:Concept",
    "dc:issued": {"@value": "2016-03-16",
      "@type": "xsd:date"},
    "dc:modified": {"@value": "2016-03-16",
      "@type": "xsd:date"},
    "rdfs:comment": {"@value": "University of Oregon alumnus?",
      "@language": "en"},
    "rdfs:label": {"@value": "Savage, Carlton",
      "@language": "en"}
},

Savage, Annie Adkins, 1836-1893
Savage, Annie Amelia
Savage, C. R.
Savage, C. R. (Charles Roscoe)
Savage, C. R. (Charles Roscoe), 1832-1909
Savage, C.R.
Savage, Carlton
Savage, Charles R.
Savage, Charles R., 1832-1909 USE Savage,
   C. R. (Charles Roscoe), 1832-1909
Savage, Charles Roscoe
Savage, Chas. R.
Savage, D. S. (Derek S.)
Savage, Fannie

Barron, Mrs. M. (child)   MSS C C. R. Savage Company Portrait Collection,
ca. 1920s   31115   Names associated with the image can refer to the
individual photographed or the individual who commissioned the photograph
          1920; 1921; 1922; 1923; 1924; 1925; 1926; 1927; 1928; 1929;
1930   Photography--Studios and dark rooms; Portraits; Biography--20th
century--Portraits;   Salt Lake City, Salt Lake County, Utah, United
States

2015	SD	American Academy of Innovation	AAI	
2013	SD	Ascent Academies of Utah	AAU	
	SPD	Alpine Conservation District (Utah)	ACD	
1935	SG	Department of Alcoholic Beverage Control	ACM	ABC

Metadata wrangling (data compiled and deduplicated)

Name	Institution;Collection;field	type	# of collections	# of institutions
Savage, C. R. (Charles Roscoe), 1832-1909	BYU;Savage;photographer -- BYU;YWJ;author -- USHS;Classified Photos;Person -- USU;bear;photographer -- USU;westernphotos;creator -- UU;Hotel Utah;Photographer/Studio -- UU;UAIDA;Creator	PN	25	4
Savage, C. R.	BYU;Diaries;personal names -- USHS;Classified Photos;Person -- USHS;Classified Photos;Photographer -- BYU;DUP;personal names -- USU;westernphotos;publisher	PN	5	3
C. R. Savage	BYU;RSMag;creator -- USHS;Classified Photos;Photographer	PN	2	2
Savage, Charles R.	USHS;Classified Photos;Person -- USHS;Classified Photos;Photographer	PN	2	1
Savage, C. R. (Charles Roscoe)	USHS;Classified Photos;Photographer	PN	1	1
Savage, Chas. R.	USHS;Classified Photos;Photographer	PN	1	1

Metadata wrangling (data reconciled)

Name	LCNAF Name	LCNAF URI
Savage, Charles Roscoe	Savage, C. R. (Charles Roscoe), 1832-1909	http://id.loc.gov/authorities/names/n84131226
C. R. Savage	Savage, C. R. (Charles Roscoe), 1832-1909	http://id.loc.gov/authorities/names/n84131226
C.R. Savage	Savage, C. R. (Charles Roscoe), 1832-1909	http://id.loc.gov/authorities/names/n84131226
Savage, Charles	Savage, C. R. (Charles Roscoe), 1832-1909	http://id.loc.gov/authorities/names/n84131226
Savage, Charles R.	Savage, C. R. (Charles Roscoe), 1832-1909	http://id.loc.gov/authorities/names/n84131226
Savage, C. R. (Charles Roscoe)	Savage, C. R. (Charles Roscoe), 1832-1909	http://id.loc.gov/authorities/names/n84131226
Savage, C.R. (Charles Roscoe)	Savage, C. R. (Charles Roscoe), 1832-1909	http://id.loc.gov/authorities/names/n84131226
Savage, Chas. R.	Savage, C. R. (Charles Roscoe), 1832-1909	http://id.loc.gov/authorities/names/n84131226
Savage, Levi	Savage, Levi, 1820-1910	http://id.loc.gov/authorities/names/no2012015057
Savage. M. W. (Marmion Wilard), 1803-1872	Savage. M. W. (Marmion Wilard), 1804-1872	http://id.loc.gov/authorities/names/n82155076
Savage, Roscoe E.	Savage, R. E. (Roscoe Eddington), 1858-1945	http://id.loc.gov/authorities/names/no2015126331
Savage, Carlton	Savage, Robert Carton, 1914-1987	http://id.loc.gov/authorities/names/n91069047

Metadata wrangling (data removed from pilot project)

Brother Adams
Brother Adamson
Brother Aitken
Brother B

Elder Ain
Elder Battersbay
Elder Benberton
Elder Burbidge

Sister Acorn
Sister Adamson
Sister Bull
Sister Bywater

Bishop Edwin F. Parry
Bishop Frank Brown
Bishop Hoagland
Bishop Puttin

Dr.
Dr. Crouch
Dr. Gelein
Dr. Ormsby

Mr. Atwood
Mr. Banker
Mr. Bomegardner
Mr. Bruce

Mrs. Benson
Mrs. Defrew
Mrs. Hayes
Mrs. Nichols

President Bollintine
President Brenerton
President Brist
President
Christianson

Captain Anknin
Captain Barnes
Captain Bretney
Captain Bulock

A.
A. B.
A. B. C.
A. B. L.
A. C. C.
A. M. P. O.

Aaron

Metadata wrangling (NACO work)

LCNAF Authorized Form	LCCN
Neilson, N. P. (Neils Peter), 1895-	no2012067295
Groberg, Delbert V., 1906-	n86859283
Quinn, Mildred D., 1908-	n78095395
Howard, Quentin, 1908-	n87852664
Clark, James R., (James Ratcliffe), 1910-	no2010206394
Haglund, Elizabeth, 1914-	n80135182
Dougherty, Thomas F. (Thomas Francis), 1915-	n85814883

```
Savage, Annie Adkins (Mother)
Savage, Annie Adkins, 1836-1893
Savage, Annie Amelia
Savage, Fannie
Savage, George L.
Savage, Ida May
Savage, Julia M
Savage, Julie Paige Hemming
Savage, Kellie
Savage, Kristin
Savage, Lana Snow
Savage, Lenny Louise
Savage, Levi Mathers
Savage, Luacine Annette
Savage, Meda
Savage, Nilson
Savage, Ralph G.
Savage, Ray T.
Savage, Rudy C.
Savage, Sarah, 1860-1932
Savage, Stephen R.
```

Metadata wrangling (NACO work)

100$a1\	400$a1\	046$f	370$a	670$a	670$a
Foote, Georgie Clawson,$d1860-1944	Foote, Georgia Clawson,$d1860-1944	1860-04-20$g1944-10-22$2edtf	Salt Lake City (Utah)$bSalt Lake City (Utah)$2naf	Hiram B. Clawson papers, 1846-1947$b(Georgie Clawson Foote)$uhttp://archiveswest.orbiscascade.org/ark:/80444/xv59963	Correspondence from Georgie Clawson Foote, 1881-1894$b(Georgie Clawson Foote; Georgia ("Georgie") Clawson Foote)$uhttps://collections.lib.utah.edu/details?id=867663&q=Foote%2C+Georgia+Clawson+%28Georgie%29%2C+1860-1944
Kesler, Frederick,$d1816-1899		1816-01-20$g1899-06-12$2edtf	Crawford County (Pa.)$bSalt Lake City (Utah)$2naf	Frederick Kesler papers, 1837-1899$b(Frederick Kesler; born 20 January 1816, Crawford County, Pennsylvania; joined LDS Church in 1840; died in Salt Lake City on 12 June 1899)$uhttp://archiveswest.orbiscascade.org/ark:/80444/xv16976/op=fstyle.aspx?t=k&q=Kesler%2c+Frederick%2c+1816-1899	
Smith, Lucy Brown,$d1821-1895	Brown, Lucy,$d1821-1895	1821-01-04$g1895-04-04$2edtf	Biggleswade (England)$bSalt Lake City (Utah)$2naf	George A. Smith family papers, 1731-1969$b(Lucy Brown; Lucy Brown Smith; born in England on 4 January 1820; joined the Mormon church in 1842)$uhttp://archiveswest.orbiscascade.org/ark:/80444/xv66580	Find a grave, website viewed 26 March 2018$b(Lucy Brown Smith; born 4 Jan 1821, Biggleswade, Central Bedfordshire Unitary Authority, Bedfordshire, England; died 4 Apr 1895, Salt Lake City, Salt Lake County, Utah)$uhttps://www.findagrave.com/memorial/25111288/lucy-smith
Smith, Lucy Emily Woodruff,$d1869-1937	Smith, Lucy Woodruff,$d1869-1937	1869-01-10$g1937-11-05$2edtf	St. Thomas (Ariz.)$bSalt Lake City (Utah)$2naf	George A. Smith family papers, 1731-1969$b(Smith, Lucy Emily Woodruff, 1869-1937; died 5 November 1937, Salt Lake City; born 10 January 1869, St. Thomas, Arizona; attended University of Utah; member of LDS church;)$uhttp://archiveswest.orbiscascade.org/ark:/80444/xv66580	Lucy Woodruff Smith correspondence: Edith Ann Smith letters, April 1910$b(Lucy Woodruff Smith)$uhttps://collections.lib.utah.edu/details?id=855625&q=Smith%2C+Lucy+Woodruff%2C+1869-1937

Investigating tools/frameworks (systems to test)

TEMATRES

IQvoc

ThManager

CA COLLECTIVE ACCESS

Opaque Namespace Controlled Vocabulary Manager
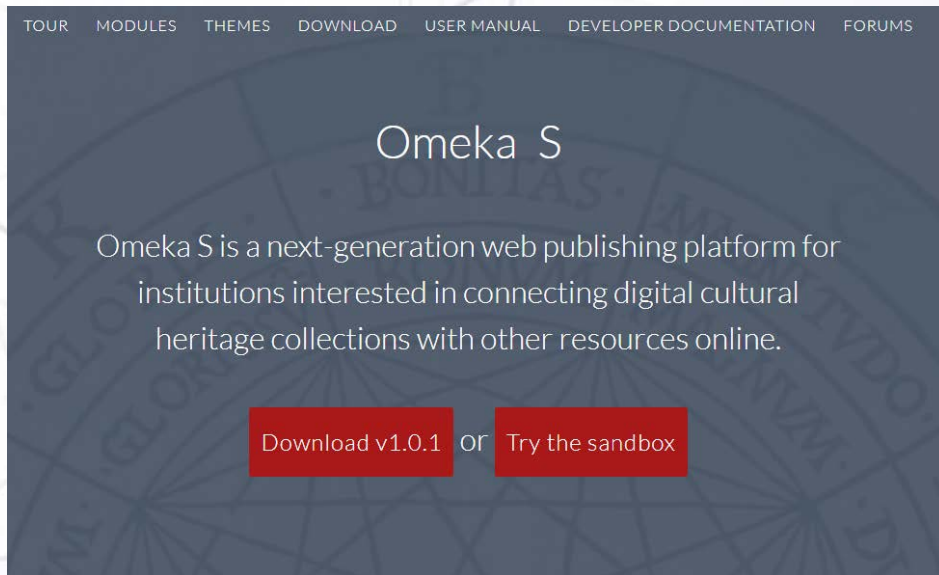
VocBench 2.0

Jena

redis

Vitro

Refine OPEN

Skosmos

omeka s

Investigating tools/frameworks (evaluation matrix)

Name	Website	Description	Local URL	General Impressions/testing notes
xEAC	https://github.com/ewg118/xEAC	Beta software, used by the American Numismatic Society	xeac.staging.lib.utah.edu	Not investigated - Proved to be too difficult to install in our sandbox environment
Apache Jena	https://jena.apache.org/	"A free and open source Java framework for building Semantic Web and Linked Data applications."	jena.staging.lib.utah.edu	Not investigated, but keep in mind if we have more development support in the future
TemaTres	http://www.vocabularyserver.com/	"an open source vocabulary server, web application to manage and exploit vocabularies, thesauri, taxonomies and formal representations of knowledge."	https://tematres.staging.lib.utah.edu	Good for simple vocabularies. Additional granularity could be accomplished by putting more information in notes and meta-terms, and/or adopting custom URL scheme to contain additional elements of descriptive information about our vocabulary.
Collective Access	http://www.collectiveaccess.org/	"CollectiveAccess is software for describing all manner of things, and allows you to create catalogues that closely conform to your needs without custom programming."	https://collectiveaccess.staging.lib.utah.edu	Highly customizable and configurable, but may take an additional time investment to discover if it will work well for how we are structuring WNAF. Can define custom vocabularies. Out of the box entity management functions match up with some elements from EAC-CPF. Integration with external vocabularies like LCNAF and ULAN.

OmekaS

- Started using for unrelated project (new Digital Exhibits Program)
- Realized it had the functions we were looking for:
  * custom vocabularies
  * API (to support reconciliation),
  * publish data as JSON-LD
  * search and discovery layer
  * editing functionality

Vocabularies in OmekaS

Vocabularies

Import new vocabulary

| 1 | of 1 | ← | → | 1–7 of 7 | | Label ⇕ | Ascending ⇕ | Sort |

Label				Prefix	Classes	Properties
Bibliographic Ontology	✏	🗑	•••	bibo	58	67
Century of Black Mormons	✏	🗑	•••	CBM	10	28
Dublin Core			•••	dcterms	22	55
Dublin Core Type			•••	dctype	12	0
EAC-CPF	✏	🗑	•••	EAC-CPF	110	107
Friend of a Friend	✏	🗑	•••	foaf	13	62
gedcom	✏	🗑	•••	gedcom	9	16

| 1 | of 1 | ← | → | 1–7 of 7 |

EAC-CPF in OmekaS

Bulk Metadata Imports

Corporate Name Searching

Western Name Authority File

About the Western Name Authority File (WNAF)   Personal Names   Corporate Names

Items

Search   zion's co-operative

1   of 1   <   >   1–2 of 2

Zion's Co-operative Mercantile Institution

Zion's Co-operative Fish Association

Zion's Co-operative Mercantile Institution

ITEM

Title
Zion's Co-operative Mercantile Institution

authorizedForm
Zion's Co-operative Mercantile Institution

alternativeForm
Zion's Co-operative Mercantile Institution (ZCMI)
Zion's Co-operative Merchantile Institution
Zion's Cooperative Mercantile Institution
Zions' Corporate Mercantile Industry (ZCMI)
Zions Cooperative Mercantile Institution
ZionÃ¢â‚¬â„¢s Corporate Mercantile Industry (ZCMI)
Z. C. M. I.
Z.C.M.I.
ZCMI

localControl
CB000010687

maintenanceAgency
Brigham Young University

Sample Record

Maurice Abravanel in his home, Utah State Historical Society Classified Photo Collection, https://collections.lib.utah.edu/details?id=430068

Abravanel, Maurice, 1903-1993

ITEM

Title
Abravanel, Maurice, 1903-1993

authorizedForm
Abravanel, Maurice, 1903-1993

alternativeForm
Abravanel, Maurice, 1903-
DeAbravanel, Maurice, 1903-
De Abravanel, Maurice, 1903-
Abravanel, Maurice

existDates
1903-1993

localControl
PN000000157

maintenanceAgency
Brigham Young University
Utah Department of Heritage and Arts
University of Utah

resourceRelation
http://contentdm.lib.byu.edu/cdm/search/collection/BYUPhotos
https://collections.lib.utah.edu/search?facet_setname_s=dha_cp
http://archiveswest.orbiscascade.org/
http://archiveswest.orbiscascade.org/

Spatial Coverage
Utah

entityId
http://id.loc.gov/authorities/names/n82101126

Visualization of Collection

Unique Personal Names

Shared Personal Names
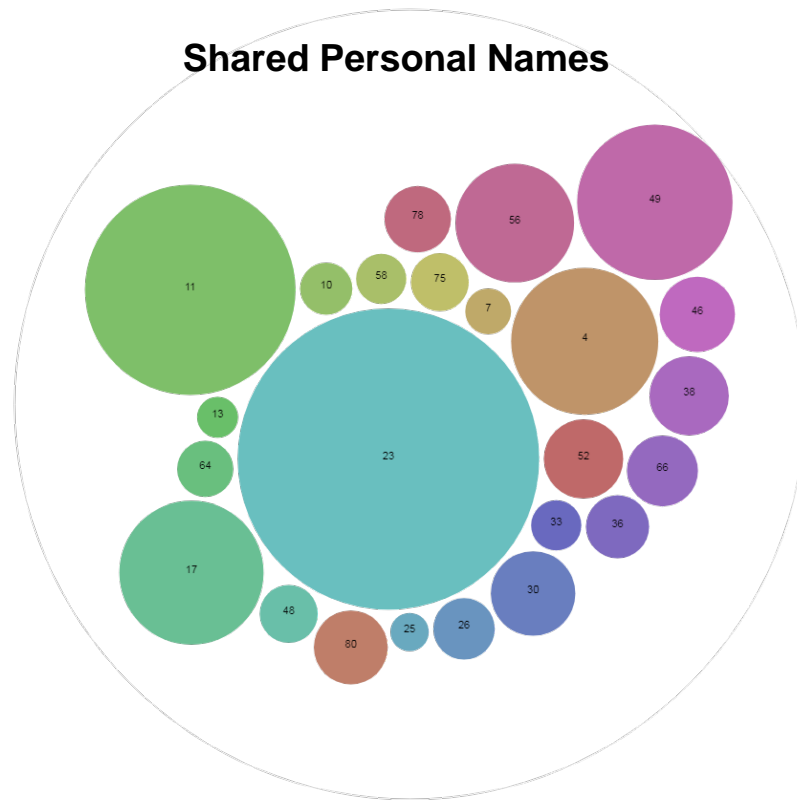
Pilot Implementation

- Perform full evaluation of OmekaS
- Student assistant work
- Enrich data with relationships and collections holding information
- Set up an OpenRefine reconciliation service for the WNAF
- Develop and revise collaborative workflows
- Leverage OmekaS API
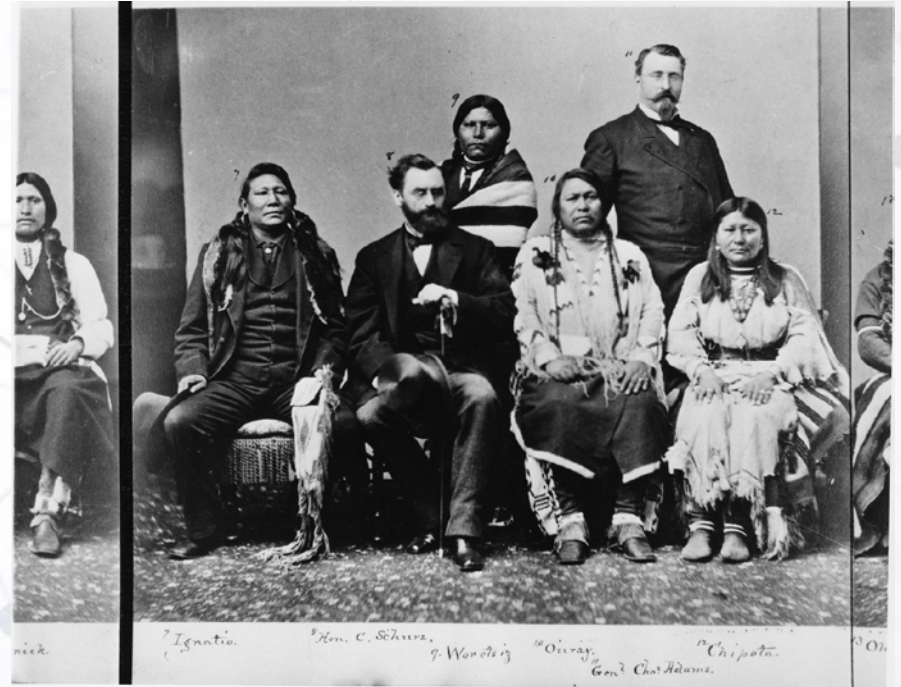
Ignatio, Hon. C. Shurtz, Woretsiz, Ouray, Gen. Chas. Adams, Chipeta
Utah American Indian Digital Archive (UAIDA)
University of Utah
https://collections.lib.utah.edu/details?id=358790

Assessment (statistics)

SQLlite database, use python requests library to query DPLA API - get stats on coverage for name variants in MWDL and DPLA.

Salt Lake Hardware Company Baseball Team
Shipler Commercial Photographers Collection
Utah Department of Heritage and Arts
https://collections.lib.utah.edu/details?id=528631

Search results in December 2016	Creator		Subject	
Name	MWDL	DPLA	MWDL	DPLA
Savage, C. R.	2022	2226	44	50
Savage, C. R. (Charles Roscoe)	1830	2023	43	44
Savage, C. R. (Charles Roscoe), 1832-1909	1708	1901	43	43
Savage, C. R., 1832-1909	1708	1901	43	43
Savage, Charles	1936	2165	60	126
Savage, Charles R.	1932	2128	58	65
Savage, Charles R., 1832-1909	1708	1902	43	43
Savage, Charles Roscoe	1833	2034	44	53
Savage, Charles Roscoe, 1832-1909	1708	1904	43	43
Savage, Charles, 1832-1909	1708	1905	43	43
Savage, Chas. R.	1	1	0	1
Savage, Chas. R., 1832-1909	0	0	0	0

Future Directions

- What does full implementation look like?
- How can an open data set like this be leveraged for other DPLA service hubs?
- What are other digital libraries doing with name authority in their collections?

SUSAN B. ANTHONY WITH A GROUP OF UTAH AND OTHER WOMEN SUFFRAGE LEADERS

First row, left to right: Zina D. H. Young; Rev. Anna Howard Shaw; Susan B. Anthony; Sarah M. Kimball, then president of Utah Women's Suffrage Association; Lyle Meredith Stansbury of Denver, Colorado.

Second row: Mary C. C. Bradford of Denver, Colorado; Margaret A. Caine; Electa Bullock; Dr. Martha Hughes Cannon; Phoebe Y. Beattie; Emily S. Richards; Emmeline B. Wells; Rebecca M. Little; Augusta W. Grant. Of all the women in this picture, Augusta Winters Grant is the only one now living.

152   THE IMPROVEMENT ERA

Women Suffrage Leaders P.02
Classified Photographs
Utah Department of Heritage and Arts
https://collections.lib.utah.edu/details?id=454440

Further reading and acknowledgements

Grant Narrative

https://www.imls.gov/grants/awarded/LG-72-16-0002-16

Project Webpage

https://sites.google.com/site/westernnameauthorityfile/home

Western Name Authority File Online

https://exhibits.lib.utah.edu/s/wnaf/

Jeremy Myntti (@jmyntti)
Anna Neatrour (@annaneat)

J. Willard Marriott Library
THE UNIVERSITY OF UTAH

INSTITUTE of
Museum and **Library**
SERVICES