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Connecting the Dots: Using Digital Scholarship Methods to Facilitate New Modes of Discovery in Special Collections

Carruthers, Matthew

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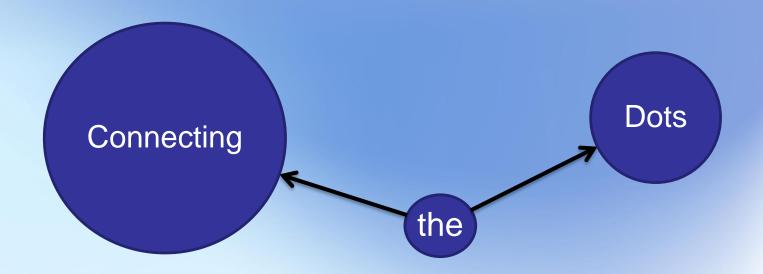
Creating the Future of Digital Scholarship Together: Collaboration from Within Your Library

Laurie Allen, University of Pennsylvania Libraries Matt Carruthers, University of Michigan Amy Hunsaker, University of Nevada, Reno Dana Miller, University of Nevada, Reno

June 24, 2017

Co-sponsors: LITA ALCTS Cataloging and Metadata Management Section ACRL Digital Humanities Interest Group





Using Digital Scholarship Methods to Facilitate New Modes of Discovery in Special Collections

Matt Carruthers
Metadata Projects Librarian
University of Michigan



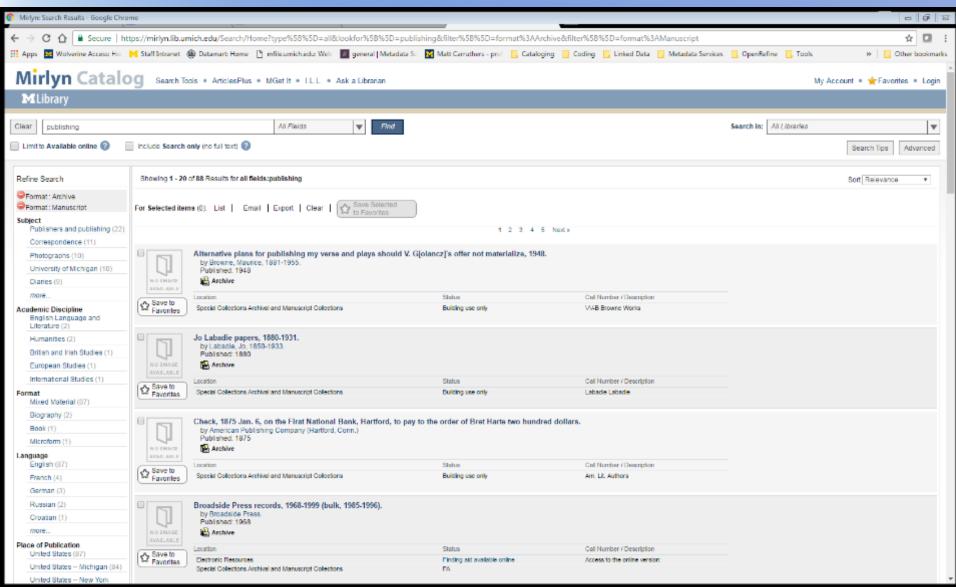
Problem Statement

Distinct archival collections can often be very interrelated, containing materials by or about the same people, institutions, or families.

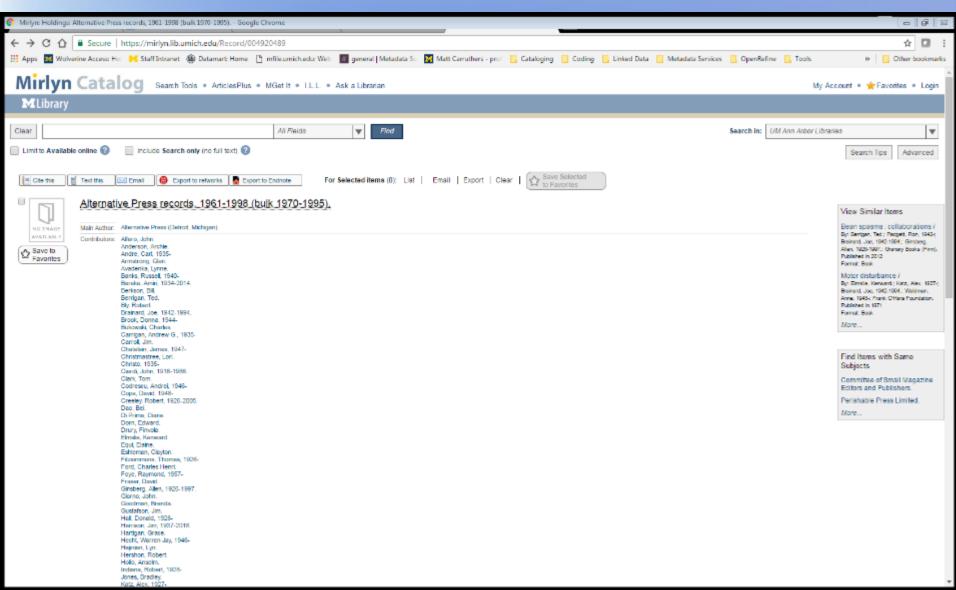
This interrelation can be key to a researcher's understanding of the materials.

However, many current discovery interfaces for archival materials are not very good at representing the complex relationships between collections or entities represented in collections.

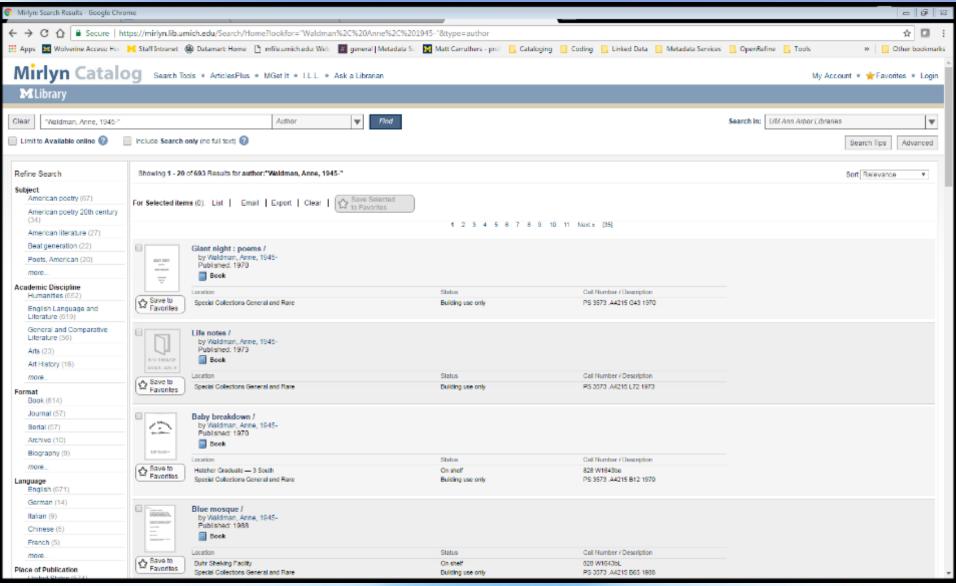




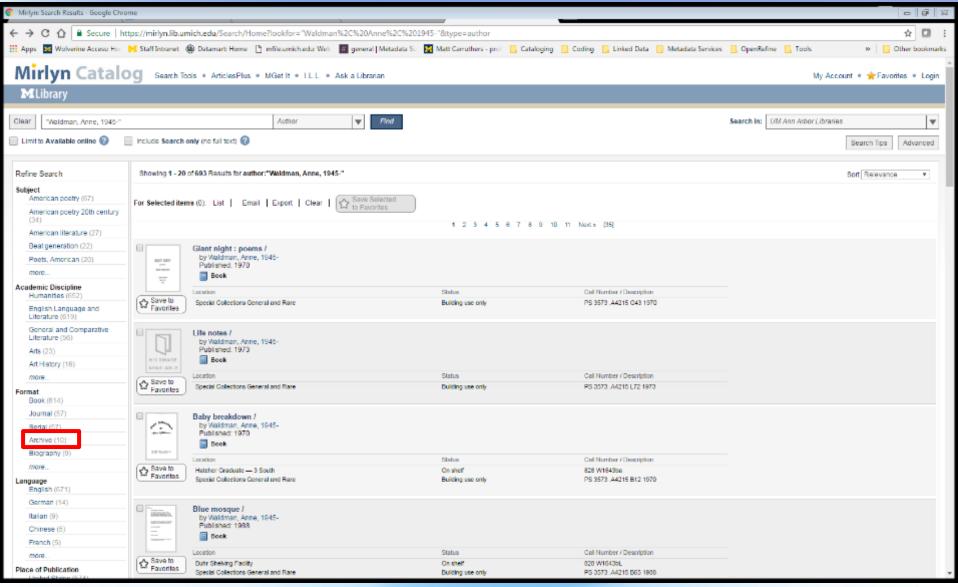




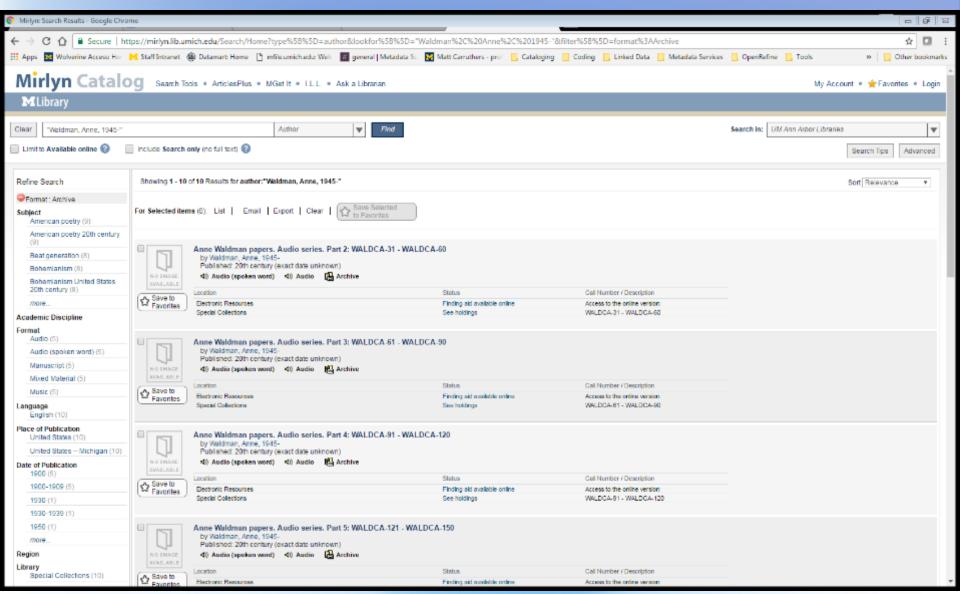




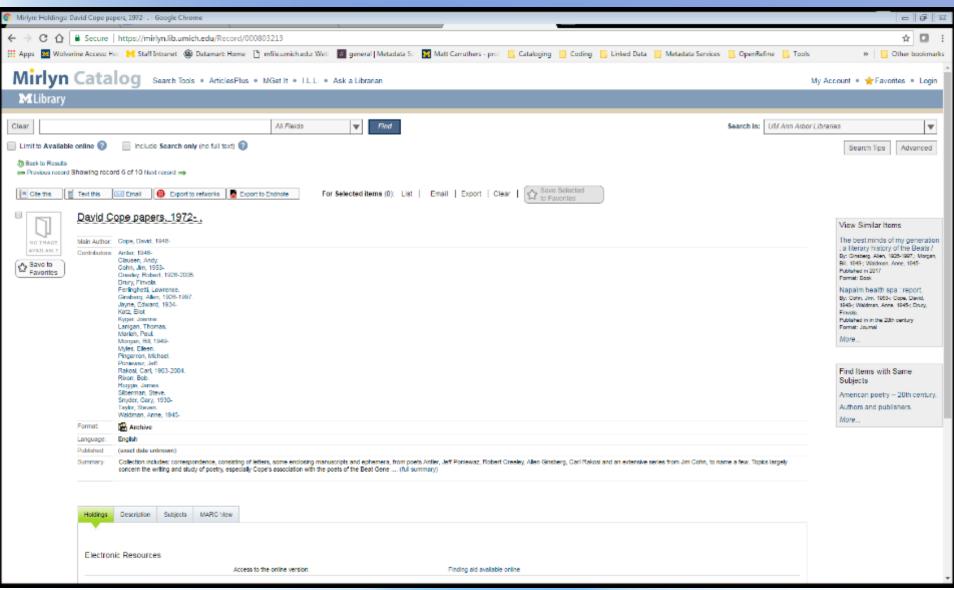




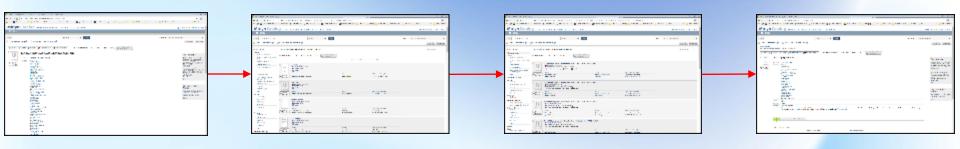










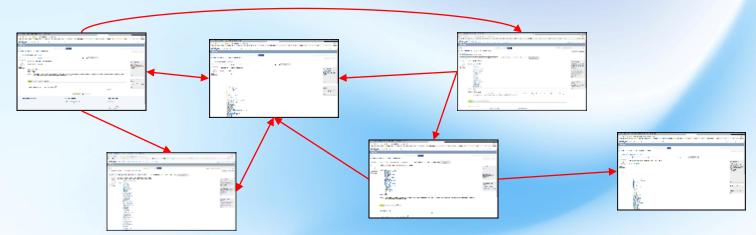




Problem Statement Pt. 2

Relationships among archival collections and entities represented in collections are often not linear.

There is often a high level of interconnectedness and context that can be lost in traditional discovery environments.





Special Collections Digital Scholarship Team

Team:

Associate Director of Special Collections
Information Resources Specialist, Special Collections
Digital Scholarship Librarian
Metadata Projects Librarian

Goals:

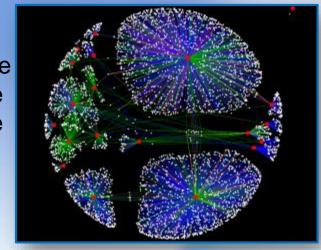
- 1. Explore using digital scholarship methods and tools to enhance user experience and resource discovery in Special Collections.
- 2. Develop a pilot project as a proof of concept for a new service.



Result

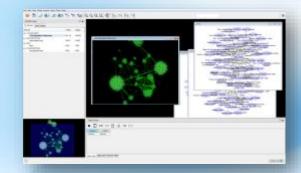
Provide visualization on demand, customized to a patron's individual research question.

- Use data from finding aids and publicly accessible databases along with open-source tools to create interactive visualizations of social networks of the entities and resources in our archival collections.
- Make connections between entities more apparent and provide a discovery tool to spur further inquiry and research.













Data Processing

EAD





EAC-CPF

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Encoded Archival Description (EAD)

 Metadata standard for the encoding of finding aids for use in a networked (online) environment. Encoded Archival Context – Corporate Bodies, Persons, and Families (EAC-CPF)

- Companion standard to Encoded Archival Description (EAD).
- Describes the entity responsible for creating (or who is represented in) one or more archival collections.



Data Processing: Tools

EAC-CPF record creation:

Social Networks and Archival Context

http://socialarchive.iath.virginia.edu/snac/search

Remixing Archival Metadata Project

http://rampeditor.info

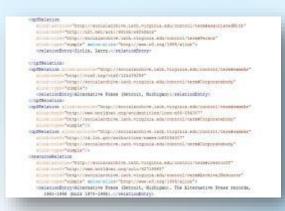
xEAC

https://github.com/ewg118/xEAC



Use XSLT to extract information about connections and format output files as tab-delimited text.

EAC-CPF



XSLT



Tab-delimited text

```
| The state of the
```



Information extracted:

- Name of connection
- Type of entity
- Type of connection
- Link to more information (when available)

```
<cpfRelation
    xlink:arcrole="http://socialarchive.iath.virginia.edu/control/term#associatedWith"
    xlink:href="http://n2t.net/ark:/99166/w6f48mrk"
    xlink:role="http://socialarchive.iath.virginia.edu/control/term#Person"
    xlink:type="simple" xmlns:xlink="http://www.w3.org/1999/xlink">
    <relationEntry>Zirlin, Larry.</relationEntry>
</cerefRelation>
```

Information extracted:

- Name of connection
- Type of entity

</cpfRelation>

- Type of connection
- Link to more information (when available)

Information extracted:

- Name of connection
- Type of entity

</cpfRelation>

- Type of connection
- Link to more information (when available)

Entity types:

- Person
- Corporate Body
- Family
- Archival Resource
- Bibliographic Resource

The Process

Information extracted:

- Name of connection
- Type of entity

</cpfRelation>

- Type of connection
- Link to more information (when available)

Connection types:

- Associated With
- Corresponded With
- Creator Of
- Referenced In

```
<cpfRelation
xlink:arcrole="http://socialarchive.iath.virginia.edu/control/term#associatedWith"
xlink:href="http://n2t.net/ark:/99166/w6f48mrk"
xlink:role="http://socialarchive.iath.virginia.edu/control/term#Person"
xlink:type="simple" xmlns:xlink="http://www.w3.org/1999/xlink">
<relationEntry>Zirlin, Larry.</relationEntry>
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Information extracted:

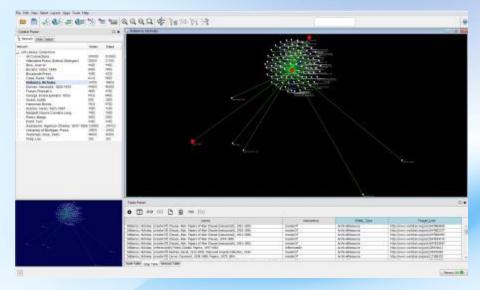
- Name of connection
- Type of entity
- Type of connection
- Link to more information (when available)

```
<cpfRelation
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    xlink:hrvf="http://n2t.net/ark:/99166/w6f48mrk"
    xlink:role="http://socialarchive.fath.virginia.edu/control/term#Person"
    xlink:type="simple" xmlns:xlink="http://www.w3.org/1999/xlink">
    <relationEntry>Zirlin, Larry.</relationEntry>
    </ce>
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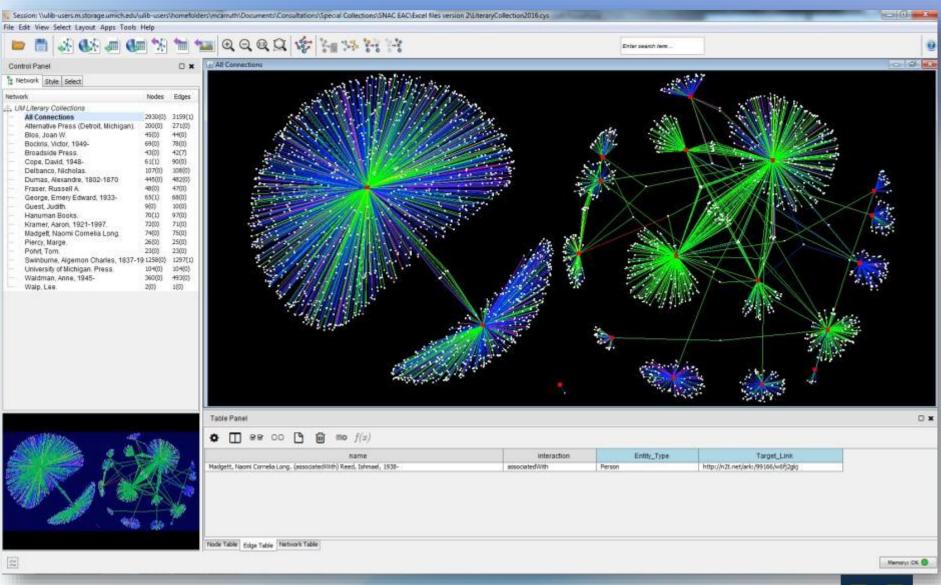
Visualizing the Data

Cytoscape - http://cytoscape.org/

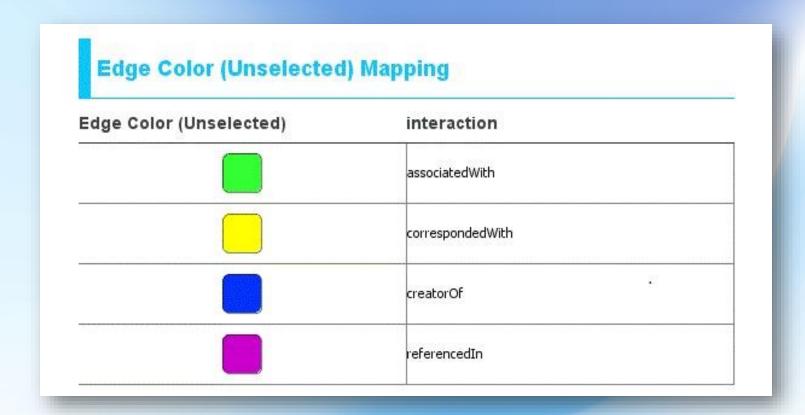
Open source desktop application for visualizing complex networks.



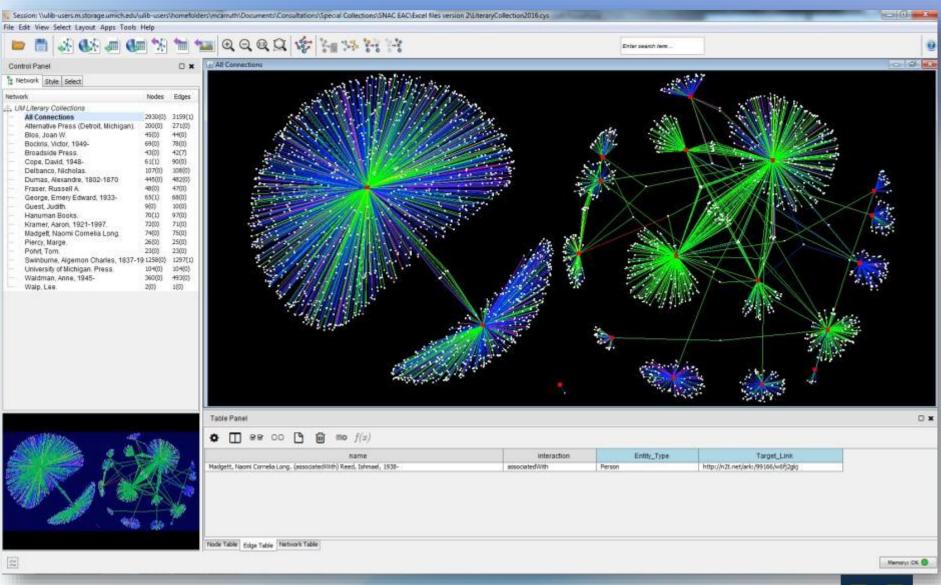


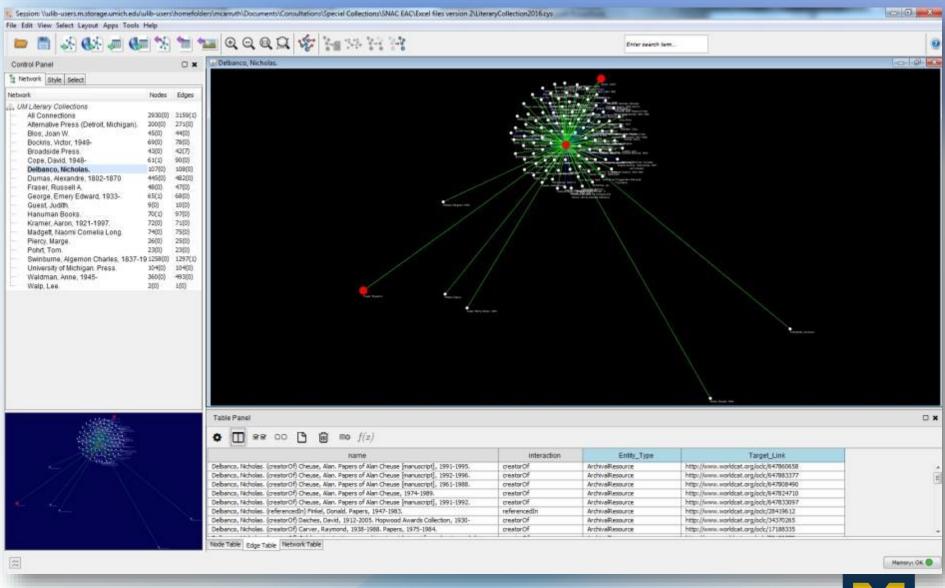


Visualizing the Data









Share visualizations via web-publishing companion platform to Cytoscape:

CyNetShare

http://cynetshare.ucsd.edu/#/

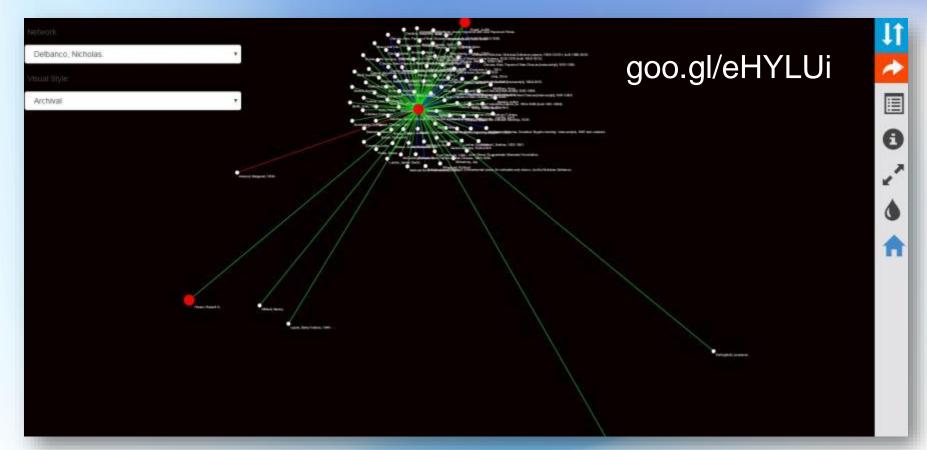
Working example:

http://goo.gl/eHYLUi

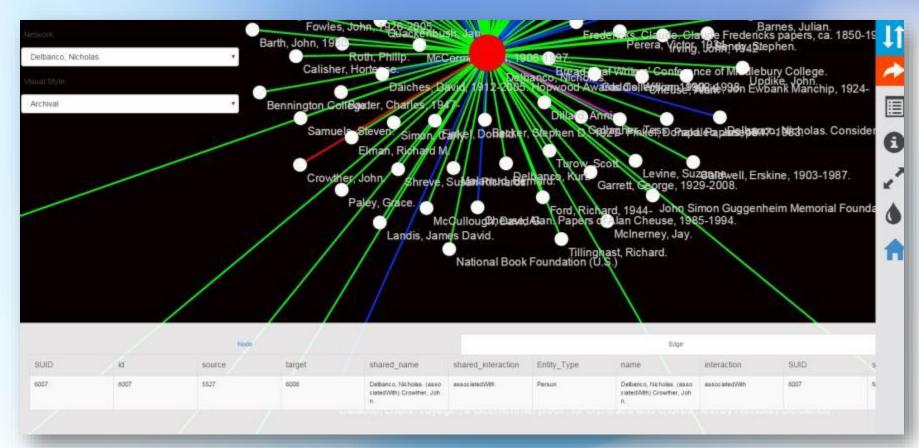














Results

- Developed a proof of concept for a new service.
- Produce customized interactive visualizations of archival collections in less than 10 minutes.
- Requires no investment of money, digital infrastructure, or support from library IT.



Consider accessibility issues



- Consider accessibility issues
- Continue to streamline the workflow



- Consider accessibility issues
- Continue to streamline the workflow
- Perform user testing (Incorporate feedback into service model)



- Consider accessibility issues
- Continue to streamline the workflow
- Perform user testing (Incorporate feedback into service model)
- Explore more options for using and manipulating the data



In general, the viability of a visualization or discovery service hinges on metadata.



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But it's also only one piece of the puzzle in creating a viable product.



In general, the viability of a visualization or discovery service hinges on metadata.

So metadata processing and manipulation techniques will play a crucial role.

But it's also only one piece of the puzzle in creating a viable product.

Use existing technologies and tools to help you whenever possible.



Thanks!

Matt Carruthers

mcarruth@umich.edu

@mattadata2

