



Palladio and Exhibit

Giving Digital Research Data Temporal,
Spatial and Relational Dimensions

26 January 2017

Objective(s)

- To introduce and compare two tools for presentation of scholarly research in temporal, spatial and relational visualisations;
- To engage in free and informal discussion about how these might be employed in your own research;
- Most of all: Inspire and Imagine.

Agenda

- Why consider either of these tools?
- What is Exhibit?
- What is Palladio?
- The common denominators
- Strengths, Weaknesses & Interoperability
- Discussion



Why are You Here?



US Cities by Population

Using [Exhibit](#), you can make this map with just the two simple files you see in [this directory](#). Could you have built the same map with as little effort using anything else?



Simile Exhibit

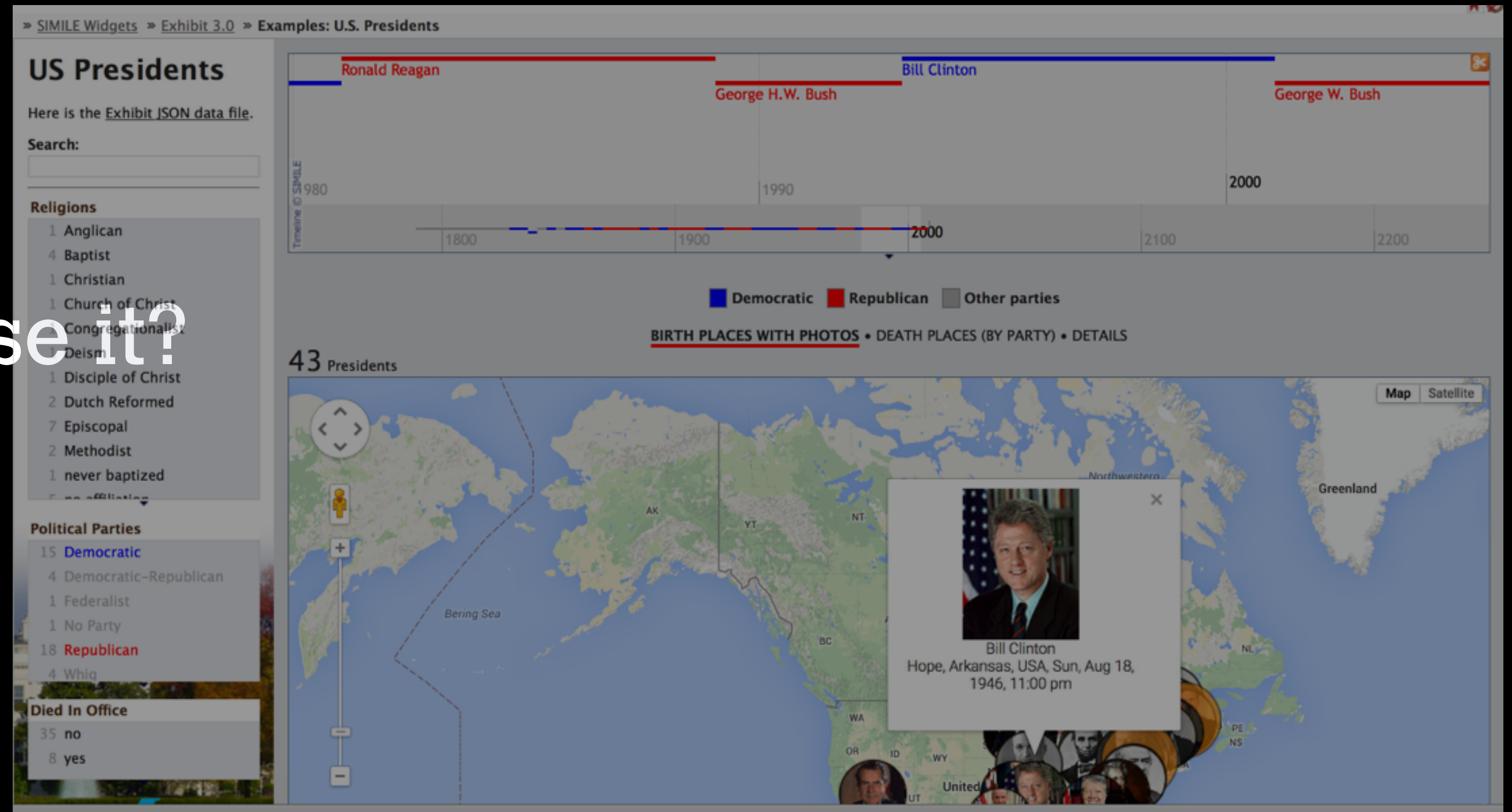
- Exhibit lets you easily create web pages with advanced text search and filtering functionalities, with interactive maps, timelines, and other visualisations;
- Beginners can deploy their dataset with minimal intervention and limited Javascript or HTML intervention;
- Experts can use their JSON, JS, HTML, CSS skills to create custom installations building on Exhibit platform;
- It can pull in media from any online source.

In Their Words

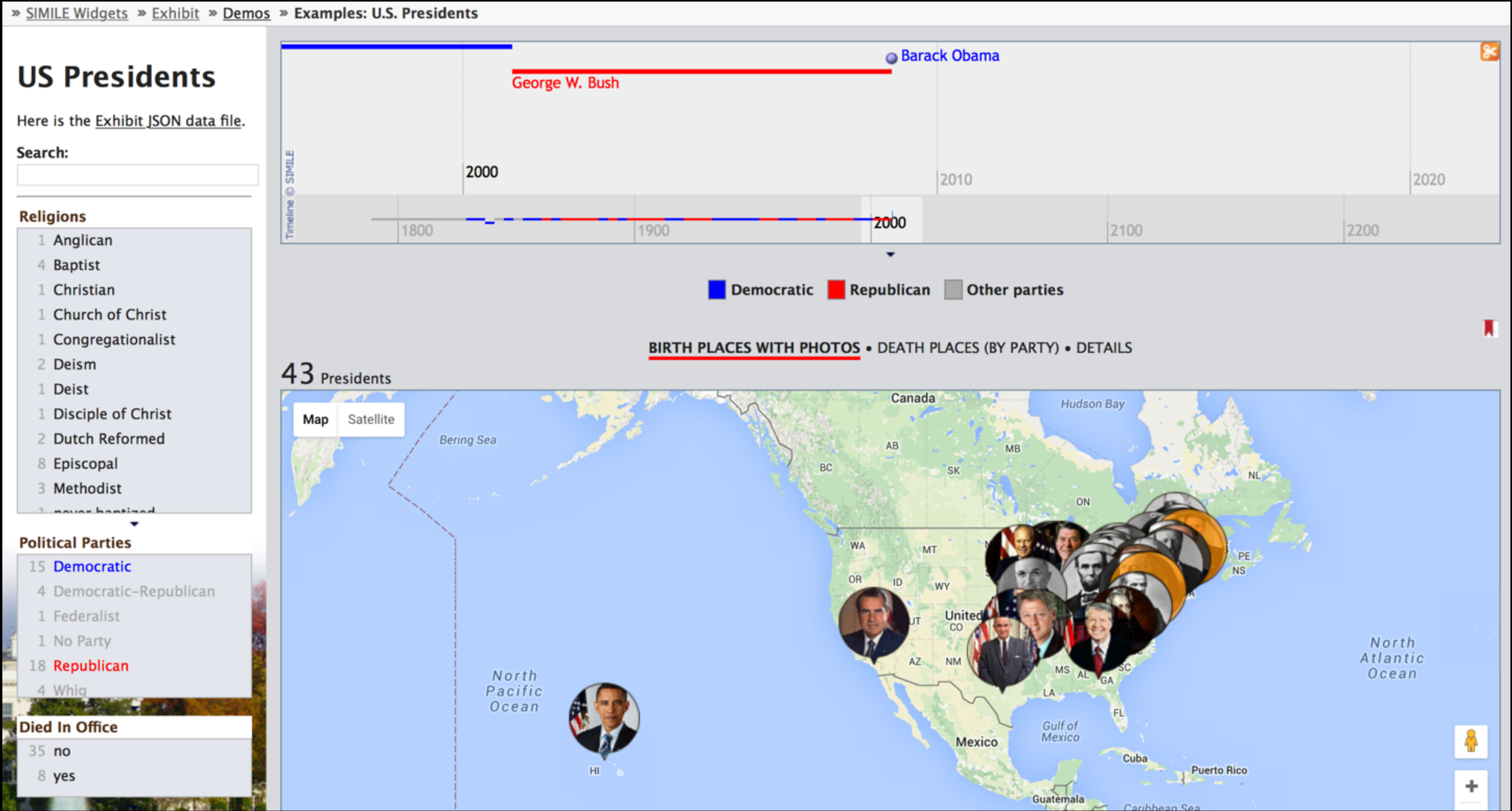
- Publishing Framework for Large-Scale Data-Rich Interactive Web Pages

Exhibit

- ▶ What's it based on?
- ▶ What does it do?
- ▶ How can I use it?
- ▶ What do I need to use it?



An Example



A More Visual Data Driven Example

» SIMILE Widgets » Exhibit » Examples: Mushrooms

Search

Cap Shape



Ecological Type



How Edible?



Hymenium Type



Spore Print Color

Mushrooms

47 Mushrooms

sorted by: labels; then by... • grouped as sorted



Agaricus arvensis

- stipe character: ring
- hymenium type: gills
- spore print color: brown
- ecological type: saprotrophic
- cap shape: convex
- how edible?: edible



Agaricus campestris

- stipe character: ring
- hymenium type: gills
- spore print color: brown
- ecological type: saprotrophic
- cap shape: convex and flat
- how edible?: edible



Agaricus subrufescens

- stipe character: ring
- hymenium type: gills
- spore print color: brown
- ecological type: saprotrophic
- cap shape: convex



Amanita citrina

- stipe character: ring and volva
- hymenium type: gills
- spore print color: white
- ecological type: mycorrhizal
- cap shape: flat

The SIMILE Stable of Tools



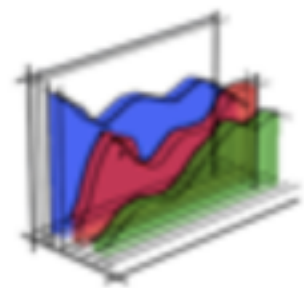
Exhibit

Create web pages with support for sorting, filtering, and rich visualizations by writing only HTML and optionally some CSS and Javascript code. No database and no server needed.



Timeline

Visualize temporal information on an interactive drag-able timeline.



Timeplot

Plot time series and overlay temporal events over them.



Runway

Display images in a Coverflow-like visualization.

Timeline

Web Widget for Visualizing Temporal Data

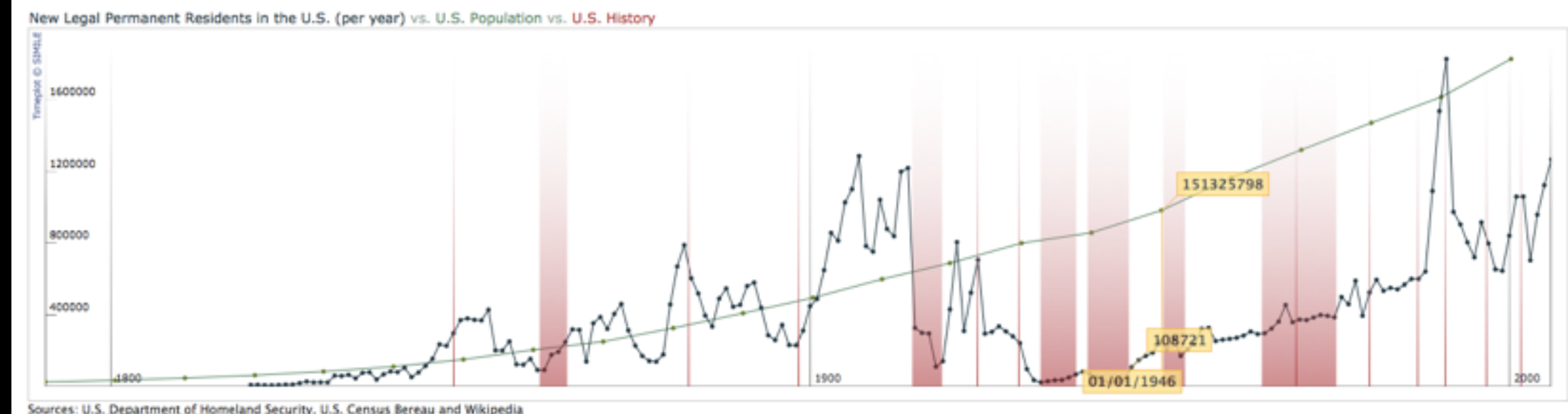
With this widget, you can make beautiful interactive timelines like the one below. Try dragging it horizontally or using your mouse-wheel. Click on each event for more details.



Timeplot

Web Widget for Plotting Time Series

Timeplot is a DHTML-based AJAXy widget for plotting time series and overlay time-based events over them (with the same data formats that [Timeline](#) supports). Here is a live example:



<http://simile-widgets.org>

A Brief History

- This software was originally sponsored partially by The Andrew W. Mellon Foundation as part of the SIMILE project.
- Its original author is David François Huynh.
- Now it is being maintained and developed by members of an open-source community.
- Initially in the SIMILE (Semantic Interoperability of Metadata and Information in unLike Environments) Lab at MIT
- Google Summer of Code
- Library of Congress

Integrating Exhibit

- WordPress Plug-ins
- Deploy on Your Server
- Choose Between a Server-based and Browser-based Version

Two Variants - How to Decide?

- Scripted
 - Limited - Thousands of Records
 - Requires access to two files no server
 - How much data do you have?
- How much technical skill do you possess?
- Staged
 - Scaleable - Millions of Records
 - Requires Server & Config

Two Exhibit Tools

- DataPress (<http://projects.csail.mit.edu/datapress/>)
- DiDo (<http://projects.csail.mit.edu/exhibit/Dido/>)
- Caveat: Both are academic research projects. If you use, always best to acquire source code for your own sustainability.

Ingredients for Exhibit

- What Do You need to Make the Magic Happen?
- A Text Editor - NotePad or Text Wrangler
- A Web Browser
- A Data Manipulation Tool - Excel, GoogleDocs?
- A Dataset
- An Open Mind
- A Few Hours
- Willingness to Play

Exhibit in a Nutshell

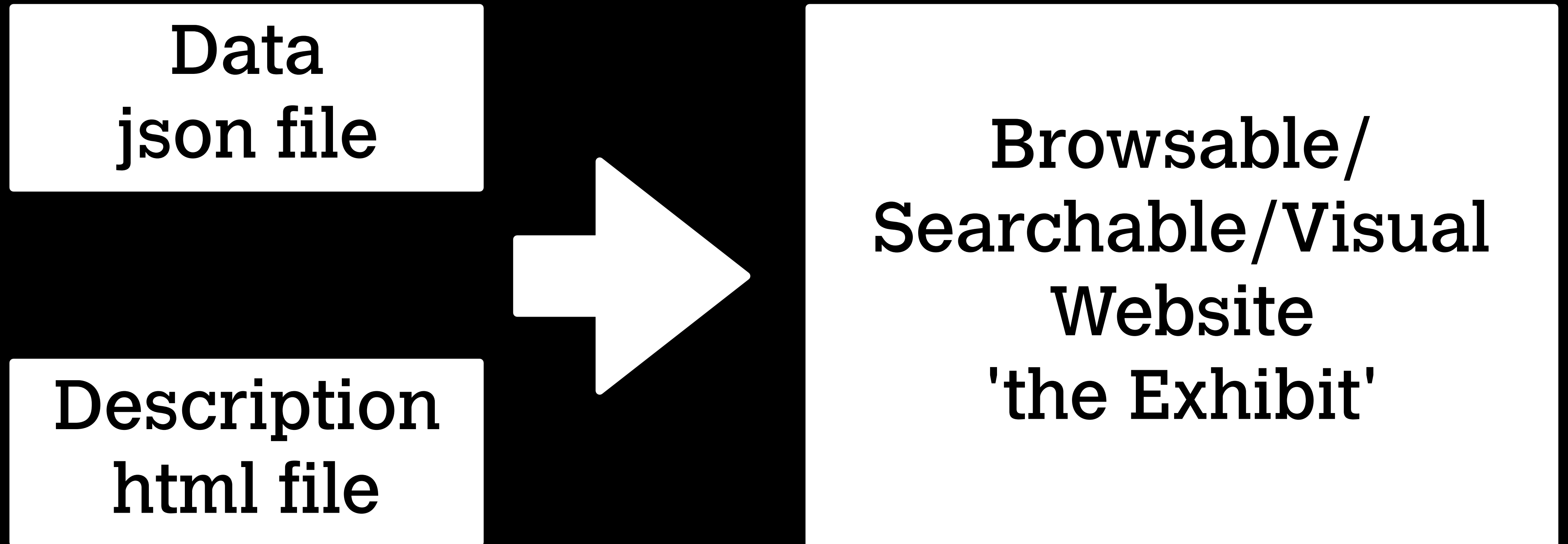
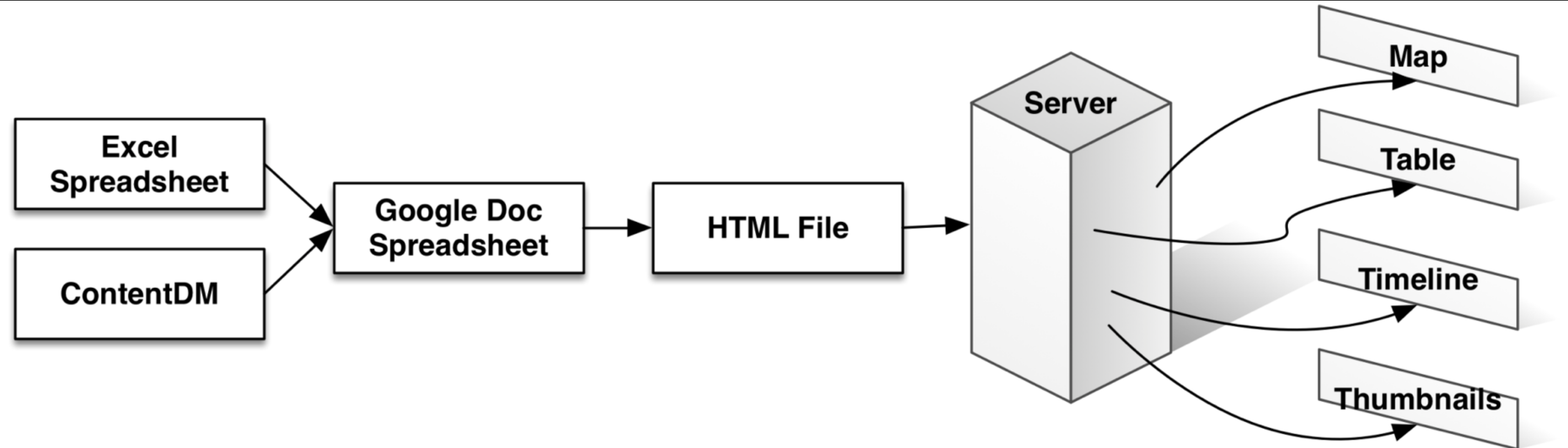


Exhibit Slightly Technical



Prepare your data for use

2014All CNEH Papers Reconciled.xlsx

Tassonyi, Almos					
A	B	C	D	E	F
1	Author:text	cleanTitle:text	th1	Institution:text	Pa label:text
2	Abbott, G.	The State of Quantitative Economic History Research in Australia		University of Calgary	Abbott1970
3	Adshade, Marina	Enabling the Visible Hand: Organizational and Technological Innovations Following		Queen's University	Adshade2003
4	Adshade, Marina	Predicting Patterns of Early Twentieth Century Wage Inequality		Dalhousie University	Adshade2008
5	Allen, Robert C.	The B.C. Economy: Past, Present, Future		University of British Columbia	Allen1985
6	Allen, Robert C.	Real Incomes in the English Speaking World, 1879-1913.		University of British Columbia	Allen1990
7	Allen, Robert C.	A Canadian Economic History Database.		University of British Columbia	Allen1999
8	Allen, Robert C.	Capital accumulation, technological change, and the distribution of income during the British Industrial Revolution.			Allen2006
9	Alston, Lee	Did US Agricultural Policy Lock Farmers into Wheat? The Capitalization of Farm Policies into Land Prices in the US and C			Alston2000
10	Altman, Morris	A New Wholesale Price Index for Canada: 1850-90 and its Application to Canadian		McGill University	Altman1984
11	Altman, Morris	Railroads as an 'Engine' of Quebec Manufacturing Growth		Carleton University	Altman1987
12	Altman, Morris	Aspects of Female Employment in Canadian Manufacturing, 1900-1930.		University of Saskatchewan	Altman1989
13	Altman, Morris	Estimates of Hours Worked in Canada, 1900-1930, and the Real Wage-Income D		University of Saskatchewan	Altman1990
14	Altman, Morris	Land Tenure, Ethnicity and the State of Agricultural Income and Productivity in Mid		University of Saskatchewan	Altman1994
15	Altman, Morris	New Estimates of Hours of Work and Real Income in Canada from the 1880s to 19		University of Saskatchewan	Altman1997
16	Altman, Morris	Staple Theory and Export-Led Growth: Constructing Differential Growth.			Altman1999
17	Anderson, Isabel	The Buckley Research Files		University of Saskatchewan	Anderson1972
18	Anderson, Isabel	Manufacturing and Urbanization After 1890		University of Saskatchewan	Anderson1973
19	Anderson, Isabel	Growth of Manufacturing in Urban Areas		University of Saskatchewan	Anderson1976
20	Anderson, Isabel	The Development of Manufacturing in Urban Areas in Central and Western Canada		University of Saskatchewan	Anderson1985
21	Anderson, Isabel	Measuring Structural Change With Incomplete Historical Data, The Case of Canad		University of Saskatchewan	Anderson1987
22	Ankli, Robert	Canadian - American Reciprocity		University of Guelph	Ankli1970
23	Ankli, Robert	The Canadian Depression in a Long-Swing Framework		University of Guelph	Ankli1972
24	Ankli, Robert	The Buckley GNP Estimates, 1900-1925		University of Guelph	Ankli1973
25	Ankli, Robert	The Growth of the Canadian Economy 1900-1920: Neo-Classical vs Export-Led		University of Guelph	Ankli1975
26	Ankli, Robert	The Adoption of the Gasoline Tractor in Western Canada		University of Guelph	Ankli1978
27	Ankli, Robert	Farm Costs in Early Ontario		University of Guelph	Ankli1981
28	Ankli, Robert	Banking in the Early Twentieth Century: The Home Bank's Balance Sheet in 1913		University of Guelph	Ankli1982
29	Antonie, Luiza	New Historical Samples and Linked Census Data for Canada, 1851-1911		University of Guelph	AntonieA2014
30	Arcand, Jean-Louis	Disequilibrium Dynamics and the Great Depression in Canada.		MIT	Arcand1990

```
{
  "items":[
    {
      "id":"Bertram1965",
      "label":"Bertram1965",
      "type":"Item",
      "uri":"http://127.0.0.1/Bertram1965",
      "modified":"no",
      "Author":"Bertram, Gordon",
      "Year":"1965",
      "cleanTitle":"The Contribution of Education to Economic Growth, 1911 - 1961: Canada and the United States",
      "Institution":"University of Victoria",
      "origin":"http://shawnday.com/cneh/authors.html#Bertram1965"
    },
    {
      "id":"Buckley1965",
      "label":"Buckley1965",
      "type":"Item",
      "uri":"http://127.0.0.1/Buckley1965",
      "modified":"no",
      "Author":"Buckley, K. W.",
      "Year":"1965",
      "cleanTitle":"On the Estimation of National Income in Canada Prior to 1900",
      "Institution":"",
      "origin":"http://shawnday.com/cneh/authors.html#Buckley1965"
    },
    {
      "id":"Chambers1965",
      "label":"Chambers1965",
      "type":"Item",
      "uri":"http://127.0.0.1/Chambers1965"
    }
  ]
}
```



The HTML Code is Really Rather Simple

```
<html>
<head>
  <title>MIT Nobel Prize Winners</title>
  <link href="nobelists.js" type="application/json" rel="exhibit/data" />
  <script src=http://static.simile.mit.edu/exhibit/api-2.0/exhibit-api.js type="text/javascript"></script>
<style></style>
</head>

<body>
  <h1>MIT Nobel Prize Winners</h1>
  <table width="100%">
    <tr valign="top">
      <td ex:role="viewPanel"><div ex:role="view"></div></td><td width="25%">browsing controls here... </td></tr>
  </table>
</body>
</html>
```


Know Your Data - Semantic

nobelists.js

```
{
  "items" : [
    {
      type : "Nobel",
      label : "Burton Richter",
      latlng : "42.359089,-71.093412",
      discipline : "Physics",
      shared : "yes",
      "last-name" : "Richter",
      "nobel-year" : "1976",
      relationship : "alumni",
      "co-winner" : "Samuel C.C. Ting",
      "relationship-detail" : "MIT S.B. 1952, Ph.D. 1956",
      imageURL : "http://nobelprize.org/nobel_prizes/physics/laureates/1976/richter_thumb.jpg",
      richter_thumb.jpg
    },
    ..... ]
  }
```

Recipe Step 1

▸ Stage and Inspect Result

MIT Nobel Prize Winners

63 Nobelists

sorted by: [labels](#); [then by...](#) • ☒ grouped as sorted

1. Aaron Ciechanover ([link](#))

label: Aaron Ciechanover
type: Nobelist
URI: <http://myeye.ie/ftp1...#Aaron%20Ciechanover>
discipline: Chemistry
shared: yes
last-name: Ciechanover
nobel-year: 2004
relationship: research
relationship-detail: MIT postdoctoral researcher 1981-84
imageURL: http://nobelprize.org/nobel_prizes/chemistry/laureates/2004/ciechanover_thumb.jpg
url: <http://nobelprize.org/chemistry/laureates/2004/index.html>

2. Andrew Fire ([link](#))

label: Andrew Fire
type: Nobelist
URI: <http://myeye.ie/ftp1/exhibit/item#Andrew%20Fire>
discipline: Medicine/Physiology
shared: yes
last-name: Fire
nobel-year: 2006
relationship: alumni
relationship-detail: MIT Ph.D. 1983
imageURL: http://nobelprize.org/nobel_prizes/medicine/laureates/2006/fire_thumb.jpg
url: <http://web.mit.edu/newsoffice/2006/fire.html>

3. Burton Richter ([link](#))

label: Burton Richter
type: Nobelist
URI: <http://myeye.ie/ftp1/exhibit/item#Burton%20Richter>



Step 2 - Browisng: The Faceted Browsing Code

```
<div ex:role="facet" ex:expression=".discipline"  
    ex:facetLabel="Discipline"></div>  
<div ex:role="facet" ex:expression=".relationship"  
    ex:facetLabel="Relationship"></div>  
<div ex:role="facet" ex:expression=".shared"  
    ex:facetLabel="Shared?"></div>  
<div ex:role="facet" ex:expression=".deceased"  
    ex:facetLabel="Deceased?"></div>
```

Step 2 Result

MIT Nobel Prize Winners

63 Nobelists

sorted by: [labels](#); [then by...](#) • ☒ grouped as sorted

1. **Aaron Ciechanover** ([link](#))

label: Aaron Ciechanover
type: Nobelist
URI: [http://digitalbedoui ... #Aaron%20Ciechanover](http://digitalbedoui...#Aaron%20Ciechanover)
modified: no
discipline: Chemistry
shared: yes
last-name: Ciechanover
nobel-year: 2004
relationship: research
relationship-detail: MIT postdoctoral researcher 1981-84
imageURL: http://nobelprize.org/nobel_prizes/chemistry/laureates/2004/ciechanover_thumb.jpg
url: <http://nobelprize.org/chemistry/laureates/2004/index.html>

2. **Andrew Fire** ([link](#))

label: Andrew Fire
type: Nobelist
URI: [http://digitalbedoui ... 2/item#Andrew%20Fire](http://digitalbedoui...2/item#Andrew%20Fire)
modified: no
discipline: Medicine/Physiology
shared: yes
last-name: Fire

Search:

Discipline

11 [Chemistry](#)
1 [Chemisty](#)
13 [Economics](#)
9 [Medicine/Physiology](#)
1 [peace](#)
1 [Peace](#)
27 [Physics](#)

Relationship

1 (missing this field)
25 [alumni](#)
25 [professor](#)
15 [research](#)
1 [staff](#)

Shared?

15 [no](#)
48 [yes](#)



Step 3 - Add a Lens for Appearance

```
<table ex:role="lens" class="nobelist">
  <tr>
    <td><img ex:src-content=".imageUrl" /></td>
    <td><div ex:content=".label" class="name"></div>
      <div><span ex:content=".discipline" class="discipline"></span>,
        <span ex:content=".nobel-year" class="year"></span></div>
        <div ex:if-exists=".co-winner" class="co-winners">Co-winners:
          <span ex:content=".co-winner"></span>
        </div>
      <div ex:content=".relationship-detail" class="relationship"></div>
    </td>
  </tr>
</table>
```

Step 3 Result

MIT Nobel Prize Winners

63 Nobelists

sorted by: [discipline](#) and [nobel-year](#); [then by...](#) • ☒ grouped as sorted

Chemistry (12)

1951 (1)

1.



Edwin M. McMillan
Chemistry, 1951
Staff, MIT Radiation Laboratory 1940-41 (deceased)

1965 (1)

1.



Robert Burns Woodward
Chemistry, 1965
MIT S.B. 1936 (deceased)

1966 (1)

1.



Robert S. Mulliken
Chemistry, 1966
MIT S.B. 1917 (deceased)

Text Search:

Discipline

- 12 [Chemistry](#)
- 13 [Economics](#)
- 9 [Medicine/Physiology](#)
- 2 [Peace](#)
- 27 [Physics](#)

Relationship

- 1 [\(missing this field\)](#)
- 25 [alumni](#)
- 25 [professor](#)
- 15 [research](#)
- 1 [staff](#)

Shared?

- 15 [no](#)
- 48 [yes](#)



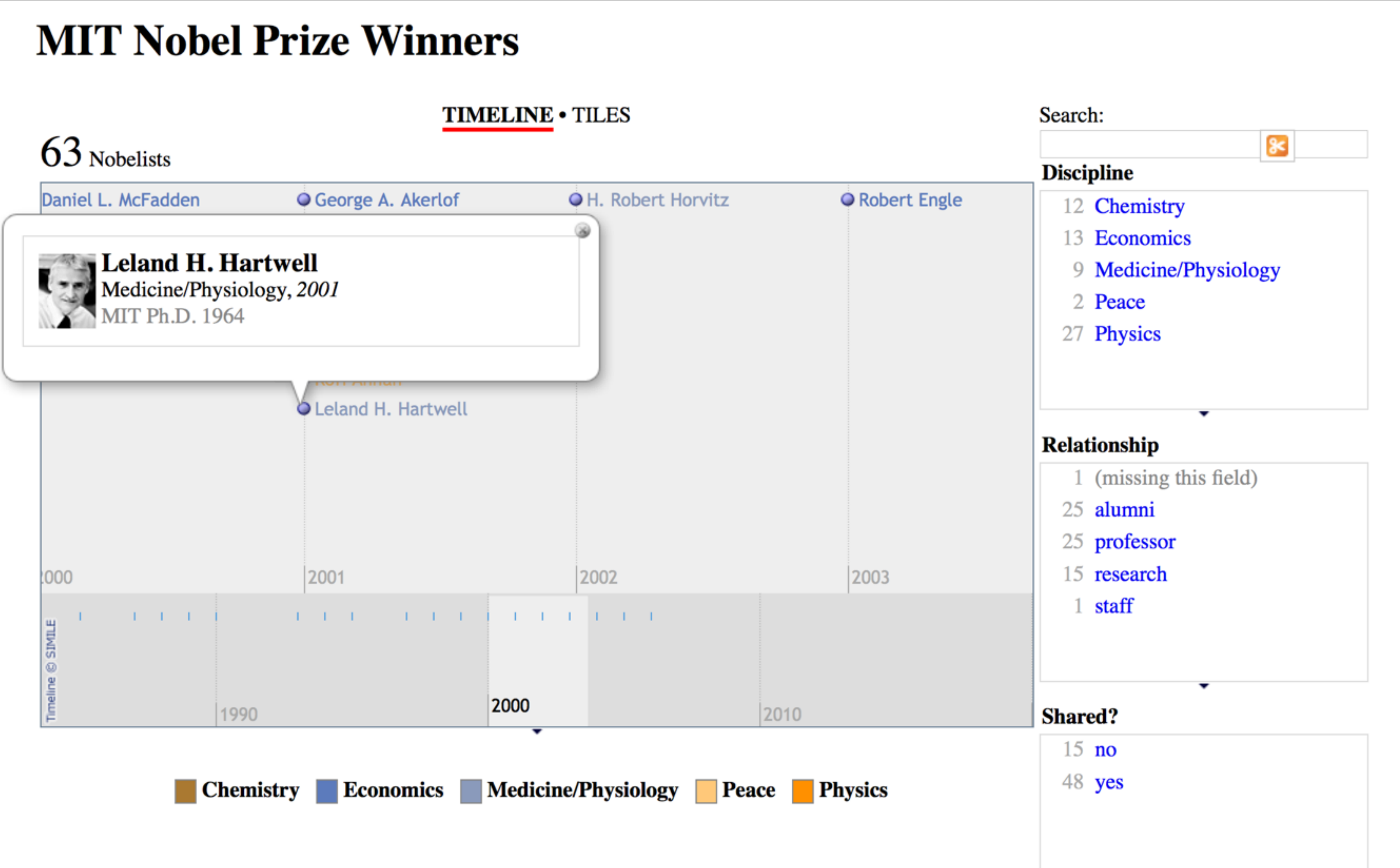
Step 4: Add a Timeline

```
<script src="http://api.simile-widgets.org/exhibit/2.2.0/extensions/time/time-extension.js" type="text/javascript"></script>
```

+

```
<div ex:role="view"  
  ex:viewClass="Timeline"  
  ex:start=".nobel-year"  
  ex:colorKey=".discipline">  
</div>
```

Step 4 Result



Step 5: Add a Map View

```
<script src="http://static.simile.mit.edu/exhibit/extensions-2.0/map/  
map-extension.js"></script>
```

+

```
<div ex:role="view"  
  ex:viewClass="Map"  
  ex:latlng=".latlng"  
  ex:pin="true">  
</div>
```

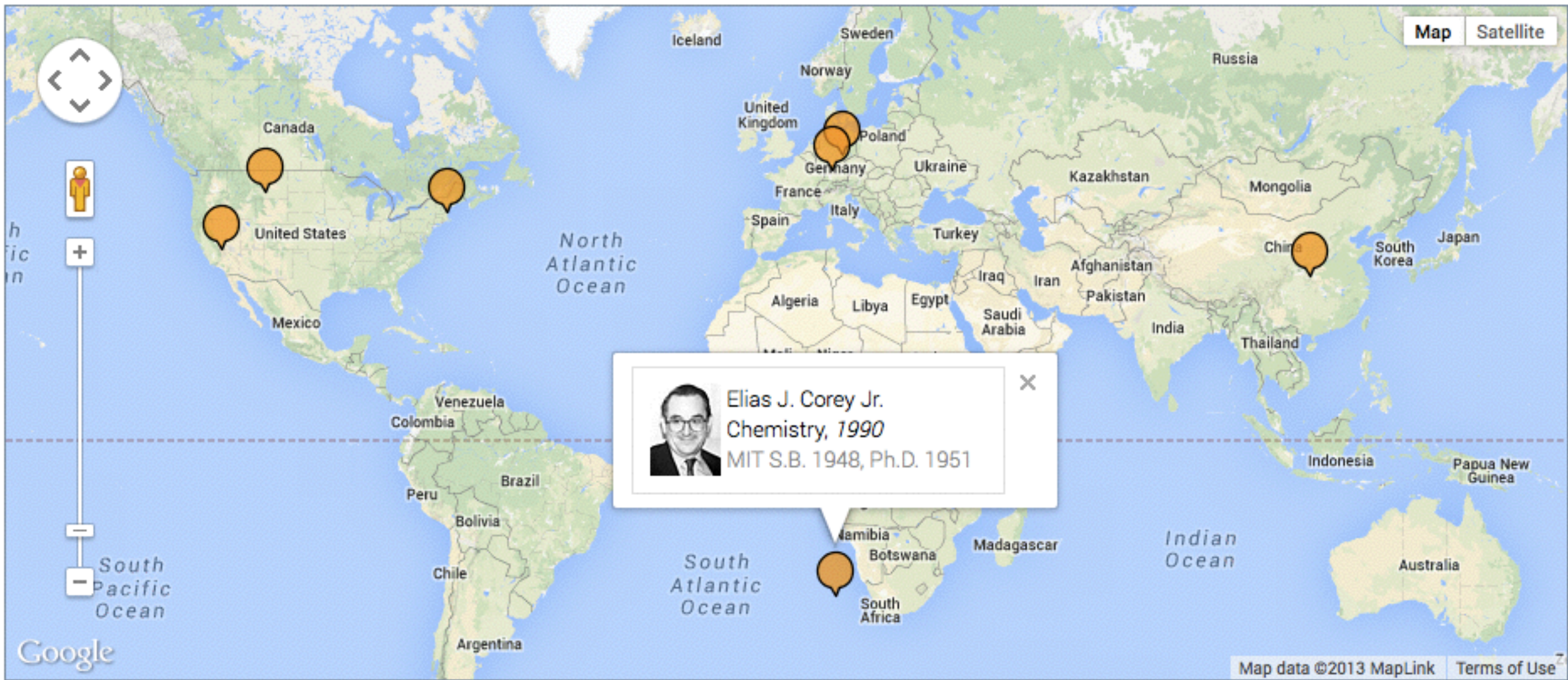
Step 5 Result

MIT Nobel Prize Winners

TABLE • TIMELINE • TILES • MAP • THUMBNAILS

63 Nobelists

[56 results](#) out of 63 cannot be plotted.



Discipline

12

Chemistry

13

Economics

9

Medicine/Physiology

2

Peace

27

Physics

Relationship

1

(missing this field)

25

alumni

25

professor

15

research

1

staff

Shared?

15

no

48

yes



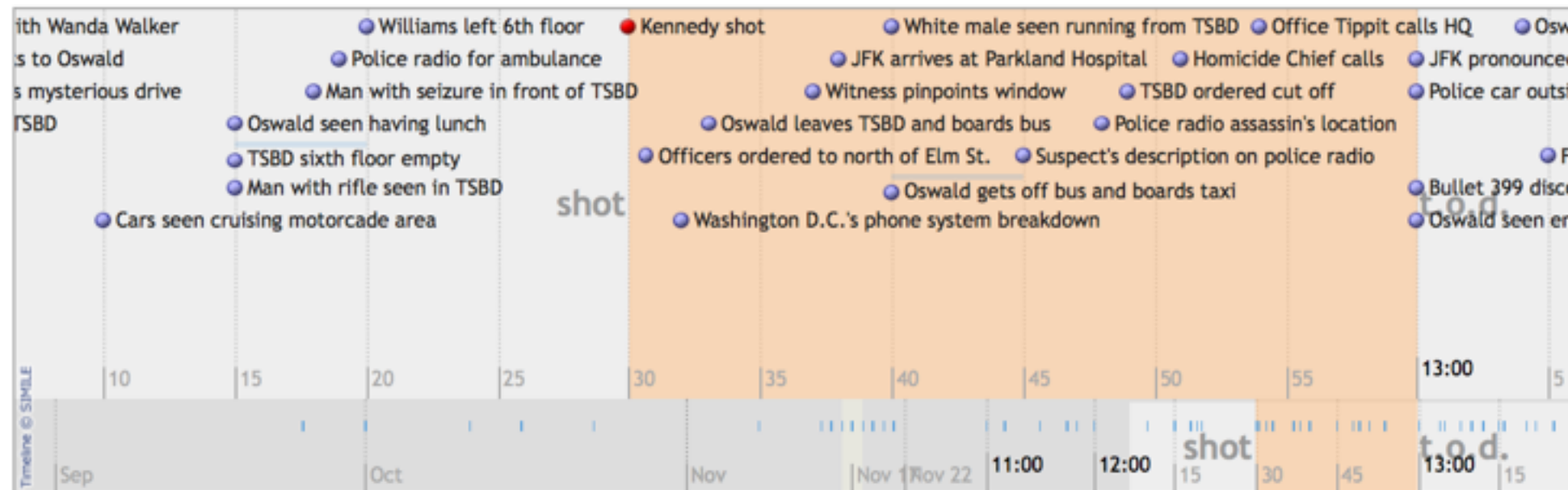
Views



The JFK Assassination Timeline

Sources: <http://roswell.fortunecity.com/angelic/96/pctime.htm>. Titles of events have been phrased by David Huynh, author of this timeline example. The this topic.

Timeline version 2.3.1 (with Ajax lib 2.2.1).



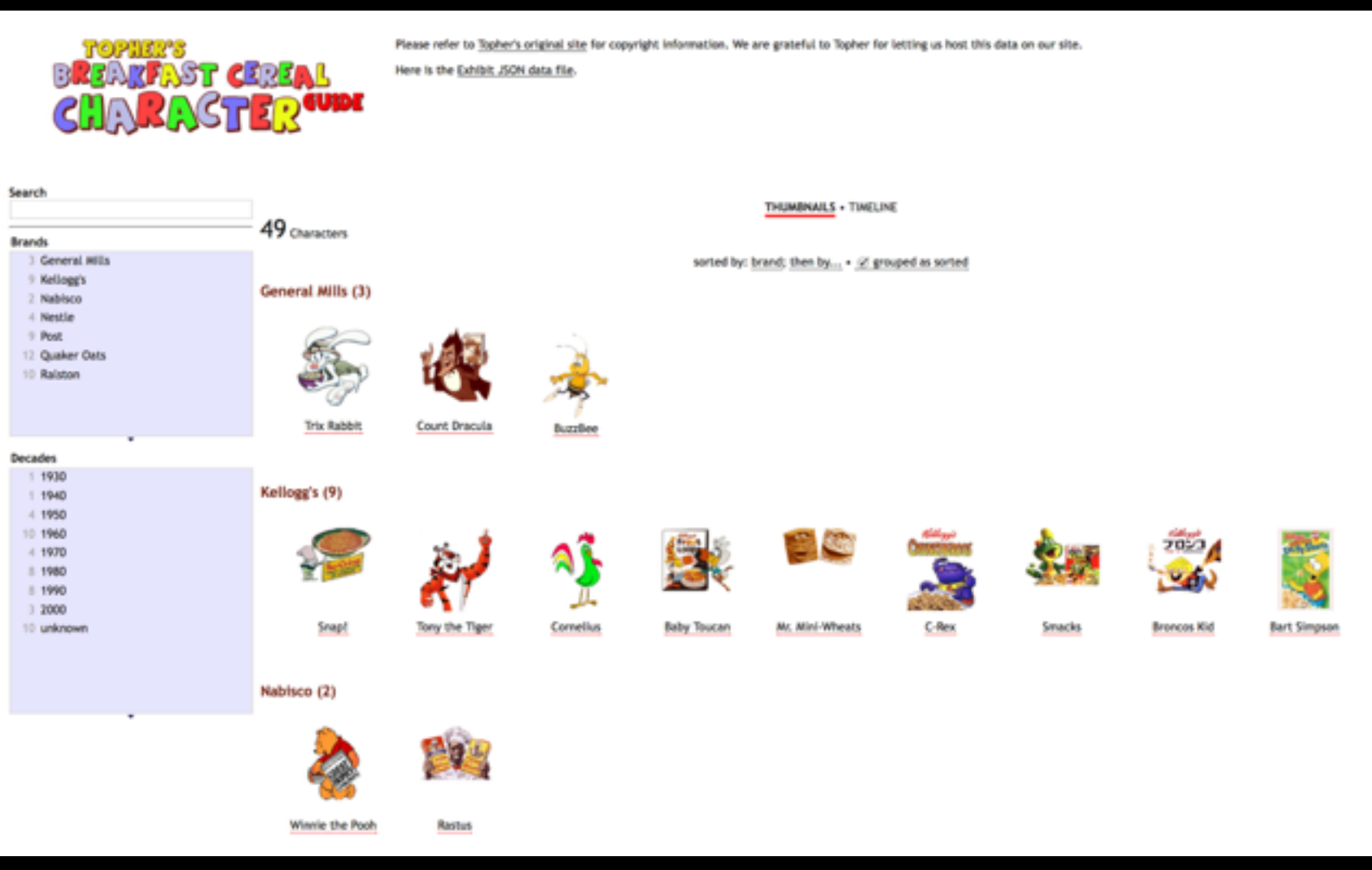
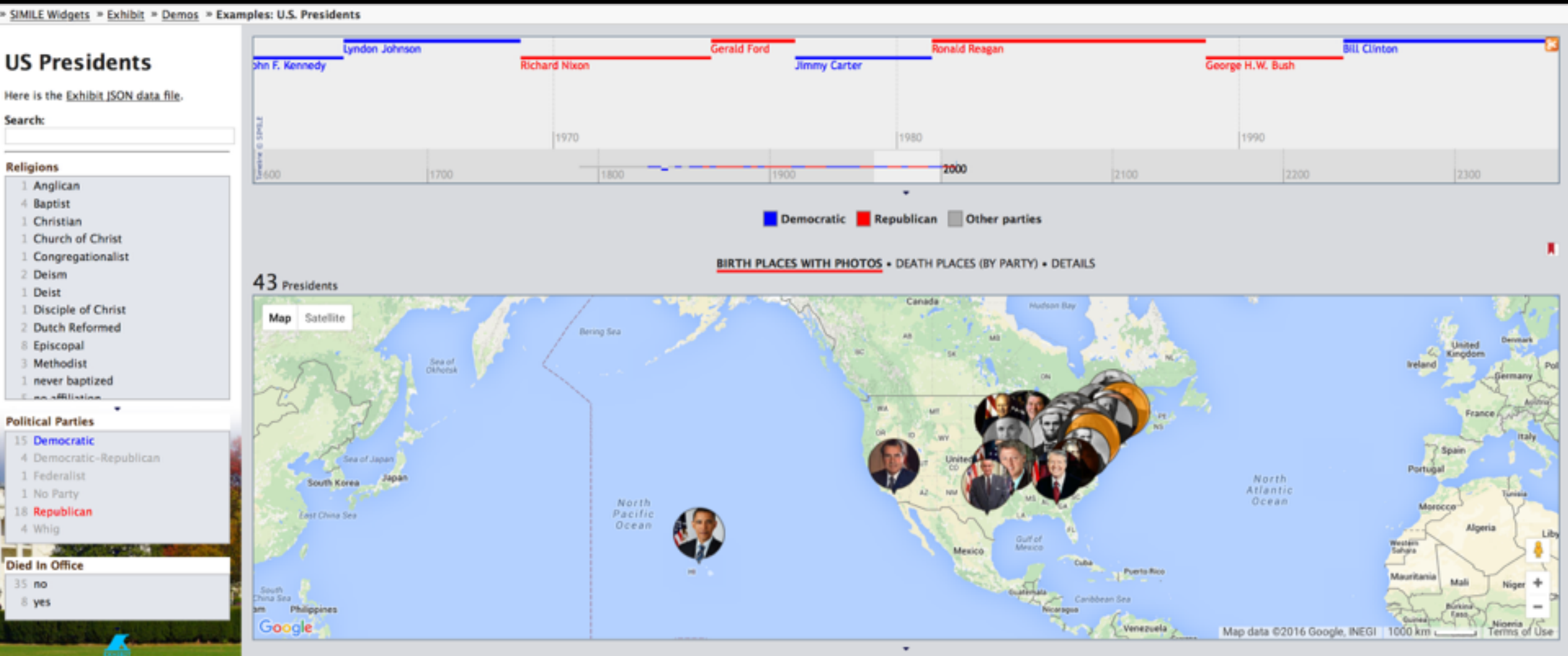
All times are in Dallas CST (GMT-0600).

Filter: Highlight: Clear All

Billionaires in History



Search
Companies
1 Aldi
1 American Fur Company
1 Berkshire Hathaway
1 Carnegie Steel Company
1 Ford Motor Company
1 Getty Oil Company
1 Hunt Refining Company
1 IKEA
1 Intel Corporation
1 Kinadom Holding Company
Countries of Origin
1 Brunei
1 France
1 Germany
1 India
1 Mexico
1 Saudi Arabia
1 Scotland
1 Sweden
1 United States



A Case Study / Caveat



[Home](#) | [2014 Conference](#) | [Upcoming Events](#) | [Resources](#) | [Past Conferences](#) | [Papers by Conference/Year](#) | [Papers by Author](#)

This table uses the [Exhibit framework](#) available from the SIMILE Project at MIT. It allows you to explore the facets of the dataset (in this case a list of all papers presented at CNEH conferences) by clicking to choose the information you want displayed from the list on the right of the screen. You can also choose to sort and display the information in different ways by choosing options from the dropdown menu, just below this text. For more information please browse to the [FAQ at SIMILE](#).

Abbott, G. (1)



The State of Quantitative Economic History Research in Australia at the 1970 Conference.

Adshade, Marina (2)

Enabling the Visible Hand: Organizational and Technological Innovations Following the Introduction of Skilled Female Labour at the 2003 Conference.

Predicting Patterns of Early Twentieth Century Wage Inequality at the 2008 Conference.

Allen, Robert C. (4)

The B.C. Economy: Past, Present, Future at the 1985 Conference.

Real Incomes in the English Speaking World, 1879-1913 at the 1990 Conference.

A Canadian Economic History Database at the 1999 Conference.

Capital accumulation, technological change, and the distribution of income during the British Industrial Revolution at the 2006 Conference.

Alston, Lee (1)

Did US Agricultural Policy Lock Farmers into Wheat? The Capitalization of Farm Policies into Land Prices in the US and Canada at



What's Cool?

- A broad community of Support;
- Mature code - well over a decade;
- Can Embed in your own web page;
- Can Embed in a WordPress Blog (Plug-In);
- Can choose from a variety of Visualisations;
- Allows full interactivity and transparency to users;
- You can modify appearance as you gain familiarity;
- Data is stored on your own service in your own space;
- It's OpenSource.

Why Exhibit

- Simple
- Javascript - Approachable - Example Based
- Modular
- Standards Based
- Doesn't Require Server Technology
- Browser Based
- Allows focus on content not on the technology
- It even works well as a mere prototyping or data validation tool - visualisation works

Exhibit on the Web

- ▶ Simile Code: <http://www.simile-widgets.org>
- ▶ Examples: http://simile-widgets.org/wiki/Examples_of_Simile_Widgets#Exhibit
- ▶ Documentation: <http://simile-widgets.org/wiki/Exhibit>
- ▶ Google Discussion: <https://groups.google.com/forum/?hl=en#!forum/simile-widgets>



Palladio

Palladio is a web-based platform for the visualization of complex, multi-dimensional data. Visit Humanities+Design.org to learn more about this NEH-funded project.

palladio.designhumanities.org

Start >

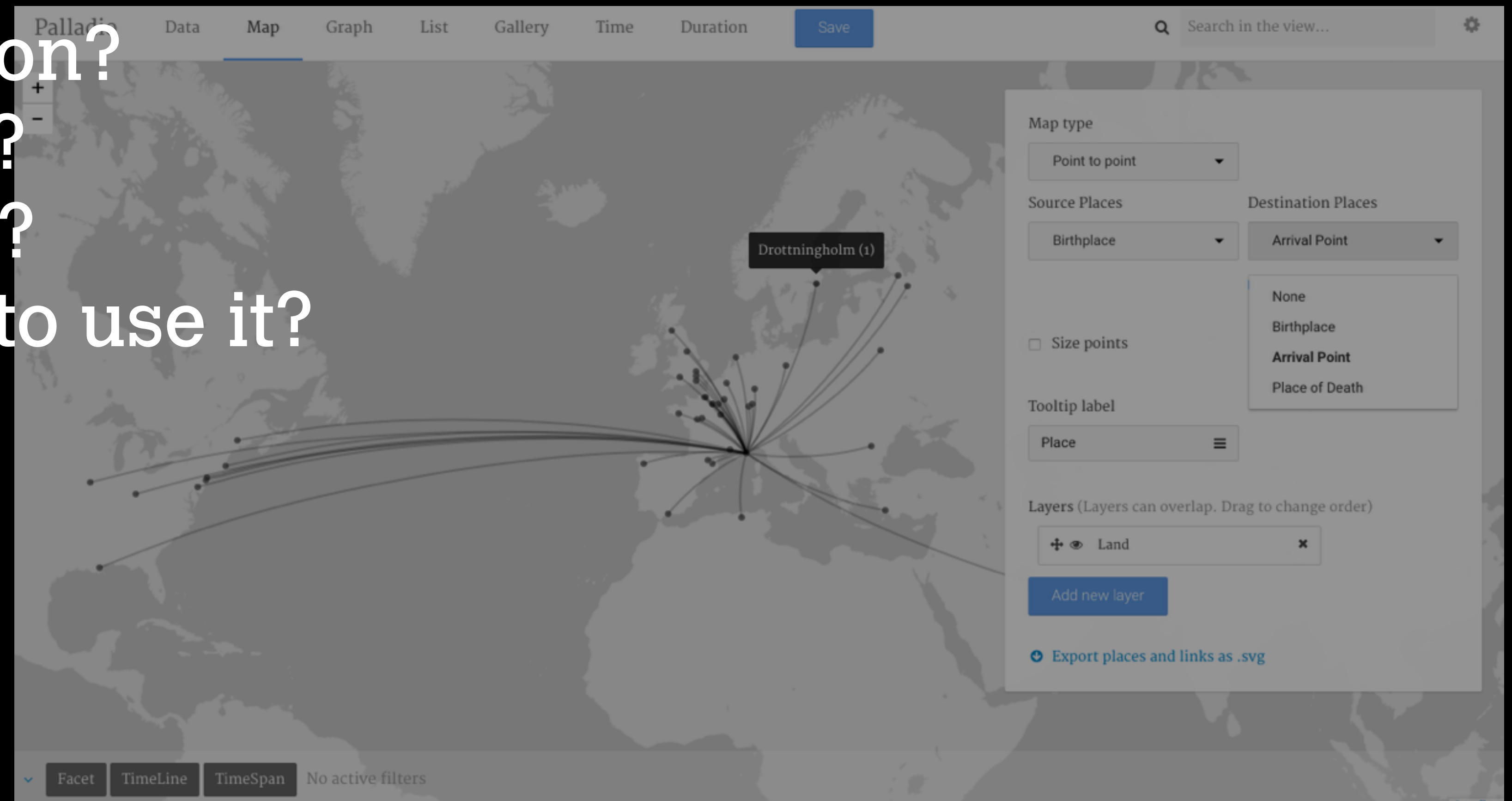
Now for something entirely different

Palladio

- Palladio is a ~~demonstration~~ application to allow scholars to easily upload data for use with an intertwined set of visualisations for analysis of complex, multi-dimensional data.
- Beginners can deploy their dataset with minimal intervention and no code requirement;
- Experts can apply their deeper understanding of the dimensions of their data to construct elaborate visualisations for analysis and presentation.

Palladio

- What's it based on?
- What does it do?
- How can I use it?
- What do I need to use it?



CESTA

- Center for Spatial and Textual Analysis
- Stanford

Labs

LITERARY LAB

- Franco Moretti, Director
- Ryan Heuser, Associate Director
- Mark Algee-Hewitt, Associate Director

[Visit the Literary Lab](#)

SPATIAL HISTORY PROJECT

- Zephyr Frank, Director
- Erik Steiner, Creative Director
- Gabriel Wolfenstein, Crowdsourcing Project Manager
- Celena Allen, GIS Specialist

[Visit the Spatial History Project](#)

HUMANITIES+DESIGN

- Dan Edelstein, Faculty Director
- Nicole Coleman, Staff Director

[Visit Humanities+Design](#)



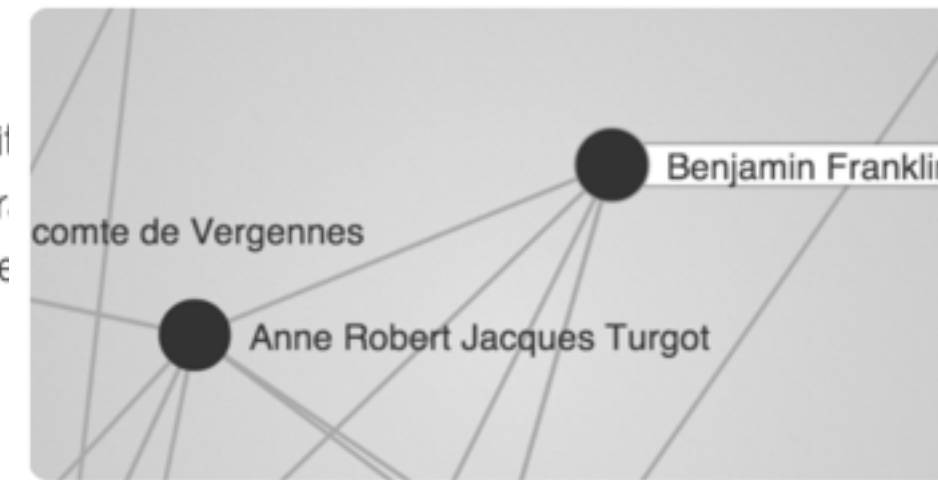
A Stable of Tools



Palladio

A visualization platform currently under development (funded by NEH) with emphasis on data refining and linking combines a map view, node-link graph view, and multiple filters. Visit palladio.designhumanities.org to learn more about the project.

Benedetto Castelli



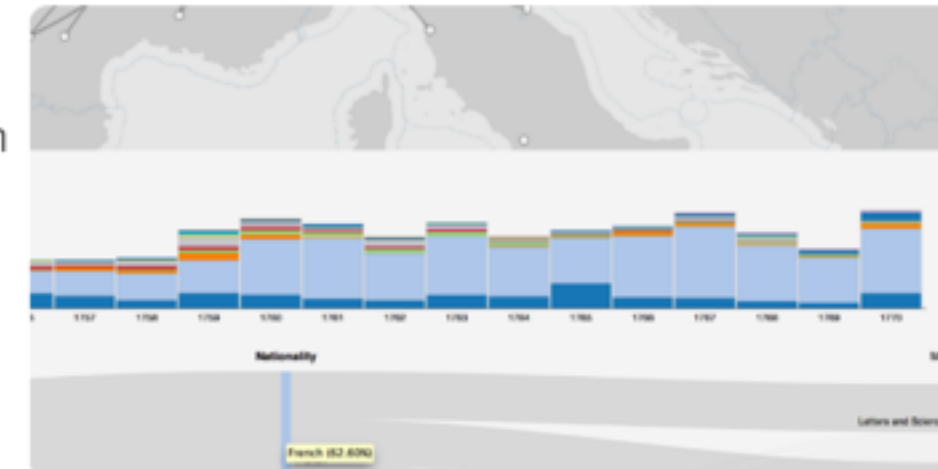
Knot

A network exploration tool that brings into play both explicit connections (through correspondence, for example) and possible networks based on collocation and affiliation.



Shuffle

A multi-dimensional facet-filter tool based on Elastic Lists, combined with timeline and gallery display of results.



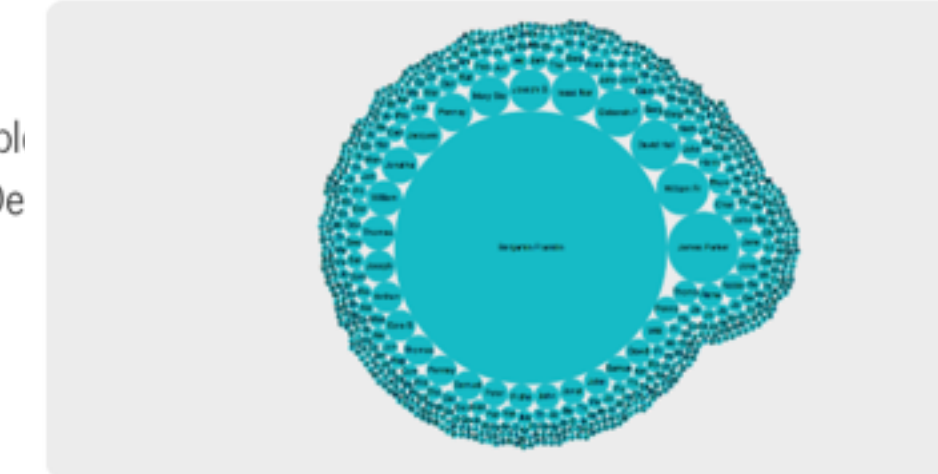
Ink

A combination of map, histogram, and flow (alluvial diagram) view highlights the relations between different dimensions of data.



Fineo

Inspired by the visual model of Sankey diagrams, Fineo allows users to explore how data is distributed between different dimensions. Created by DensityDe Research Lab, Politecnico di Milano.



Inquiry

A tool for generating layered maps based on complex queries.

At the Outset

▸ Palladio is an evolving tool

Humanities + Design a Research Lab at Stanford University

+ About People Projects ▾ Lab Notebook Tools Fellowship Program Teaching 

Palladio Release Notes: 0.9.0

Jan 27, 2015

Bug Fixes

- Major performance fix to data load/processing.
- Filters applied on facet filter dimensions don't go away when the facet filter is removed (thanks to Christoph Kudella for the bug report).
- Application was non-functional after refreshing while in the visualization view. Now fixed.
- Changing table and dimension names in the data view did not update in the visualization view (thank you, again, Christoph!). Fixed.

Enhancements

- New Filter View Modes. We are refining and re-working the filter components (timeline and facet-filter) so that each has three view modes: small, medium, large. The 'large' view is comparable to one of the primary data views (map, graph, table, gallery) in that it functions as a display that can be filtered by time or facet.
- Timeline Filter. The double-decker timeline is gone. The timeline filter is streamlined and elegant.
- Timespan Filter. Now displays records that only have a start date or an end date as points.
- Map Layers. Drag to order layers.
- Map Layers. Sort order is reversed so that top layer is at the top of the list.
- Facet filter. Indicates number of values in each facet.
- Facet filter. Small bottom margin.



Where Does it Come From?

1730 1790 Go



D'Alembert's Correspondence



About the project

Group D'Alembert (CNRS, France) brings together several volumes of scientific literature, encyclopedias, and this, many search tools (inventories, bibliographies) on the site <http://dalembert.obspm.fr/>

One ambition of this collective work is to see, in particular, the emphasis is placed on the relationship between

In this sense, the correspondence often plays a role in the work that all eighteenth-century scholars, and two hundred letters preserved, correspondence

Marie-Laure Massot joined the *Mapping the Republic of Letters* visualizations of D'Alembert's correspondence database. Beyond the collaboration, it was for the Humanities, Computer science and Design. A [correspondence]

Exploring the metadata for D'Alembert's correspondence of the eighteenth century through his data to have a better idea

Lead: Irène Passeron

Start Date:

Team: Marie-Laure Massot

Visualization



Ingredients

- A Data File; and
- Your Browser.
- Simple.

Step 1

▸ Upload Your Data

Create a new project

Load an existing project

Try with sample data

Create a new Palladio project by uploading your data from a spreadsheet or flat-file, or load data from a SPARQL endpoint.
[Not sure how Palladio works?](#)

Load .csv or spreadsheet


Copy and paste out of your spreadsheets, drag-and-drop to upload tabular data (e.g. .csv, .tab, .tsv), or link to a file in a public Dropbox folder to create a new Palladio project. [Not sure how to structure your data?](#)

1

Load

More than one table? No problem! If you have more than one table, start by uploading your primary table. The primary table should contain the main entities you want to visualize. It could be a collection of objects, like persons or letters, or more abstract concepts, like relationships or flows. Once you have uploaded your primary table, you will be able to extend it with additional information from other tables.

[Load data from a SPARQL endpoint \(beta\)](#)

The logo of University College Dublin (UCD) is located in the bottom right corner. It features a blue shield with three white towers at the top, the letters 'UCD' in white in the center, and a green harp at the bottom.

Step 2

► Message Your Data

P

DataMapGraphTableGallery

Provide a title to this project

Show details

People

Primary table73 rows

Name	Text
Birthplace	45 Places
Arrival Point	1 Places
Birthdate	Date
Gender	Text
Position	Text
Place of Death	18 Places
Date of Death	Date
Pic	Url
Site	Null
Primary	Text

Places

Coordinates

Edit dimension

TitleName

DatatypeText

All the values match this type.

Unique valuesSearchSort by Value

Aga Khan III
Albert Aubert
Alice Heine
Anton Dolin
Antony Noghes
Basil Zaharoff

73 values displayed.Download

ExtensionChoose a tableAdd a new table

You can provide additional information about this dimension with data from another table.

Verify special characters?
Multiple values?
If the dimension contains multiple values, insert the delimiter string above

Close

Recipe Step 3

People

Primary table73111

Name

Text · Special chars

Review

Birthplace

Text

45 Places

Arrival Point

Text

1 Places

Birthdate

Date

Gender

Text

Position

Text

Place of Death

Text

18 Places

Date of Death

Date

Pic

Places

Secondary table6921

Place

Text

Coordinates

Coordinates · Special chars

Review

You can add additional tables by extending fields in your existing tables. For example, if your primary table is a list of letters, each letter may have an author. You can extend the author field and upload a new file with additional bibliographic information about the people who appear as authors in your letter table.

You can also extend secondary tables. For example, your table with bibliographic information may include a birth place, and you may want to extend this field with using a third table with additional information about locations, such as latitude and longitude coordinates.

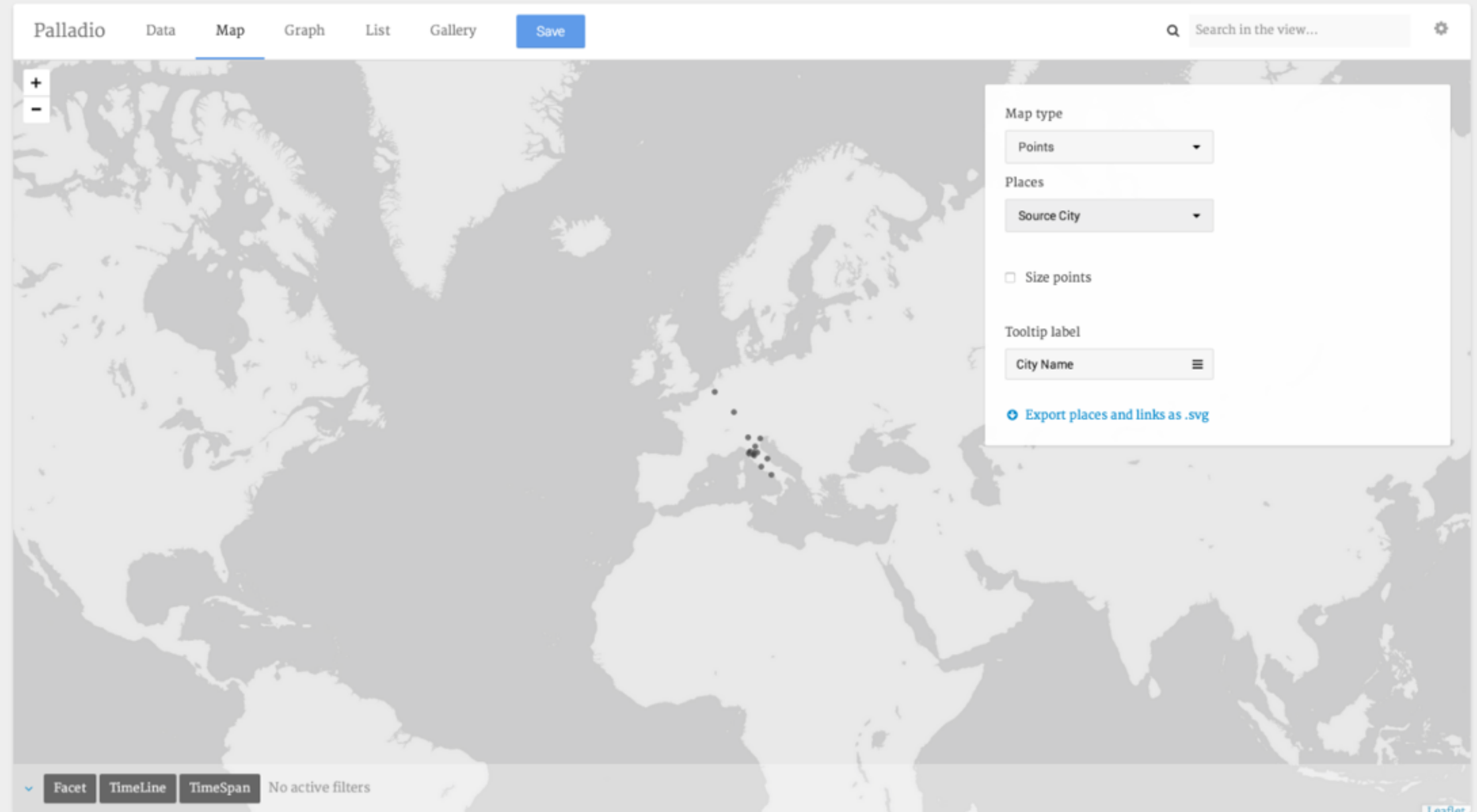
These secondary tables must have a column with unique values that match the values in the field you are trying to extend.

The logo of University College Dublin (UCD) is located in the bottom right corner. It features a blue shield with three white castles at the top, the letters 'UCD' in white, 'DUBLIN' in smaller white letters below it, and a green harp at the bottom.

Recipe Step 4

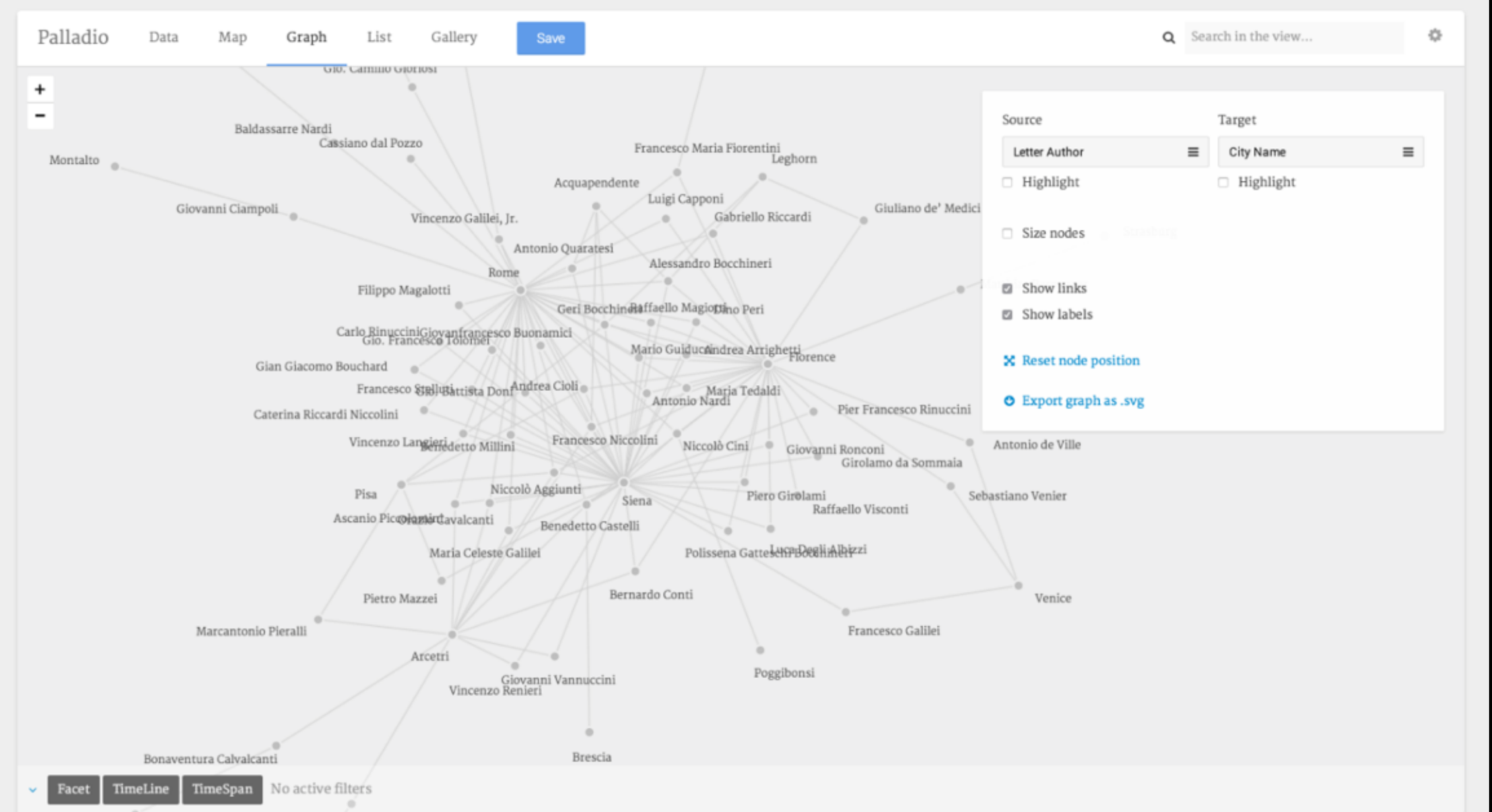
View

In the **Map view**, you can see any coordinates data as points on a map. Relationships between distinct points can be connected by lines, with the arc of the line representing the flow of the relationship. Points on the map can be sized to represent their relative magnitude within your data. With the map's tooltip function you can select which information will be displayed when hovering over a specific point on the map. Zoom in and out using the + and – buttons. Export the nodes and links of Map visualizations (though not the Map background itself) as .svg files



Recipe Step 5

In the **Graph view**, you can visualize the relationships between any two dimensions of your data. Graph information will be displayed as nodes connected by lines. Nodes can be scaled to reflect their relative magnitude within your data. The display of links and labels can be toggled on and off. Export Graph visualizations as .svg files.



Recipe Step 6

In the **List view**, dimensions of your data can be arranged to make customized lists. Export List visualizations as .csv files.

Palladio	Data	Map	Graph	List	Gallery	Save	Search in the view...	
Letter Author	Destination State	Destination City	Letter Recipient					
Vincenzo Renieri	Grand Duchy of Tuscany	Arcetri	Galileo Galilei					
Alessandro Bocchineri	Papal States, Grand Duchy of Tuscany	Acquapendente, Rome, Siena	Galileo Galilei					
Vincenzo Galilei, Jr.	Grand Duchy of Tuscany, Papal States	Siena, Rome	Galileo Galilei					
Sebastiano Venier	Grand Duchy of Tuscany	Florence	Galileo Galilei					
Raffaello Visconti	Grand Duchy of Tuscany	Siena	Galileo Galilei					
Raffaello Magiotti	Grand Duchy of Tuscany	Siena, Florence	Galileo Galilei					
Polissena Gatteschi Bocchineri	Grand Duchy of Tuscany	Siena	Galileo Galilei					
Pietro Mazzei	Grand Duchy of Tuscany	Siena	Galileo Galilei					
Piero Girolami	Grand Duchy of Tuscany	Siena	Galileo Galilei					
Pier Francesco Rinuccini	Grand Duchy of Tuscany	Siena	Galileo Galilei					
Orazio Cavalcanti	Grand Duchy of Tuscany	Arcetri, Siena	Galileo Galilei					
Niccolò Cini	Grand Duchy of Tuscany, Papal States	Siena, Rome, Florence	Galileo Galilei					
Niccolò Aggiunti	Grand Duchy of Tuscany, Papal States	Siena, Rome, Arcetri	Galileo Galilei					
Matthias Bernegger	Grand Duchy of Tuscany	Florence	Galileo Galilei					
Mario Guiducci	Papal States, Grand Duchy of Tuscany	Rome, Siena	Galileo Galilei					
Maria Tedaldi	Papal States, Grand Duchy of Tuscany	Rome, Siena	Galileo Galilei					
Maria Celeste Galilei	Papal States, Grand Duchy of Tuscany	Rome, Siena	Galileo Galilei					
Marcantonio Pieralli	Grand Duchy of Tuscany	Arcetri	Galileo Galilei					
Luigi Capponi	Papal States	Rome	Galileo Galilei					
Luca Degli Albizzi	Grand Duchy of Tuscany	Siena	Galileo Galilei					
Giu	Facet	TimeLine	TimeSpan	No active filters				
























Recipe Step 7

In the **Gallery view**, data can be displayed within a grid setting for quick reference. Here dimensions of your data can also be linked to outside web-based information. Sort your data according to different dimensions.

PalladioDataMapGraphListGallerySave

Search in the view...

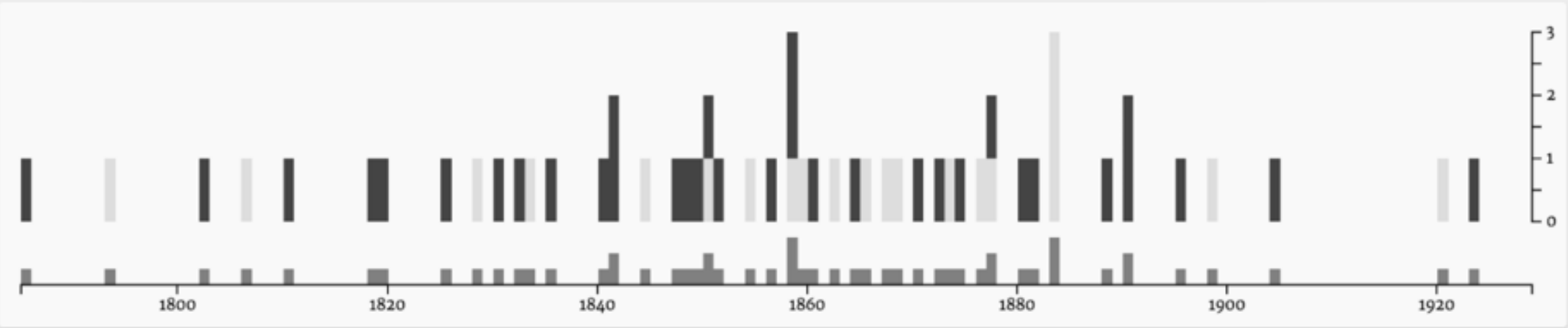
 <div>Aga Khan III Aristocracy Karachi</div>	 <div>Alice Heine Aristocracy New Orleans</div>	 <div>Anton Dolin Artist Slinfold</div>	 <div>Antony Noghes Monegasque Py</div>	 <div>Basil Zaharoff Financier Mugla</div>
 <div>Camille Blanc Financier Paris</div>	 <div>Charles Garnier Artist Paris</div>	 <div>Charles Wells Gambler Hertfordshire</div>	 <div>Coco Chanel Artist Saumur</div>	 <div>Colette Artist Yonne</div>
 <div>Constantin Radziwill Financier Minsk</div>	 <div>Consuelo Vanderbilt Aristocracy New York</div>	<div>Duc de Valmy Financier Paris</div>	 <div>Edith Wharton Artist New York</div>	 <div>Edmond Blanc Financier Paris</div>
 <div>Edward VII Aristocracy London</div>	 <div>Elsa Maxwell Consultant Keokuk</div>	<div>Eugene Marquet Monegasque Monaco</div>	<div>Eynaud Manager Paris</div>	 <div>Francois Blanc Financier Courthezon</div>
<div>Francois Lefebvre Financier</div>	 <div>Gerald Murphy Tourist Boston</div>	 <div>Grace Kelly Aristocracy Philadelphia</div>	 <div>Gustav V Aristocracy Drottningholm</div>	 <div>Gustave Dore Artist Strasbourg</div>

FacetTimelineTime SpansNo active facets

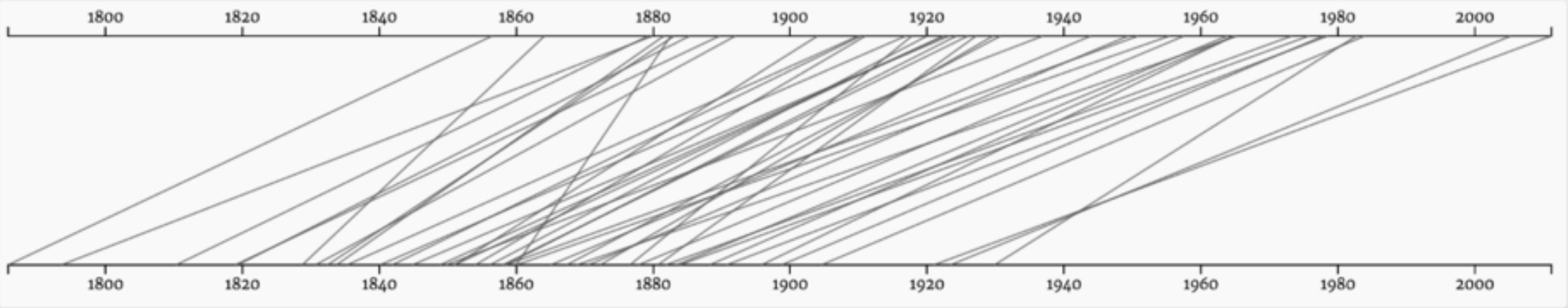
Recipe Step 8

Filter

With the **TimeLine** tool you can display temporal information as stacked bar graphs. Using these graphs you can customize the visualizations above to reflect specific temporal periods of your choosing. Display any kind of temporal information and group this temporal data according to different dimensions.



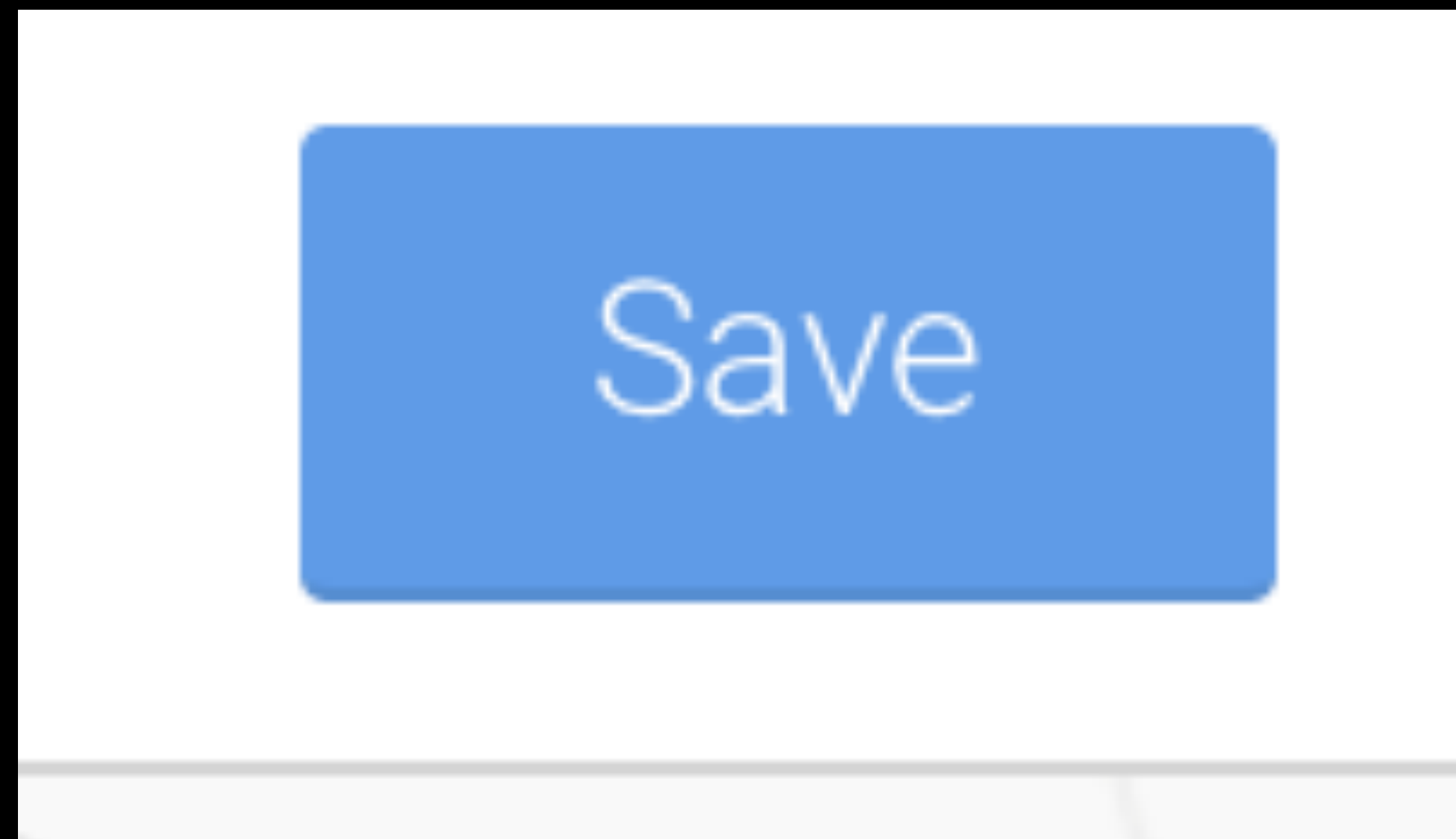
The **TimeSpan** tool works similarly to the Timeline in terms of its display and filtering capabilities, but in this case spans of time (in other words, anything with a starting and ending date) are represented as individual entities. Timespans can be displayed as parallel coordinates or horizontal bars.



With the **Facet Filter** tool (based on [Moritz Stefaner's Elastic Lists](#)) you can focus on very specific aspects of your research by applying filters to different dimensions within your multi-dimensional data. The possible combinations are limited only by your data. You can also see numerical information about your specific dimensions, which may especially useful within large and complex datasets.

Birthdate	<input checked="" type="checkbox"/> 1/2	Birthplace	<input checked="" type="checkbox"/> 1/2	Date of Death	<input checked="" type="checkbox"/> 1/2	Place of Death	<input checked="" type="checkbox"/> 1/2	Position	<input checked="" type="checkbox"/> 1/2
	5 / 5	Paris	17 / 17		18 / 18		21 / 21	Aristocracy	23 / 23
1785-10-10	1 / 1	Brussels	2 / 2	1856-6-20	1 / 1			Artist	13 / 13
1862-1-24	1 / 1	Germany	2 / 2	1957-7-11	1 / 1	Paris	13 / 13	Financier	11 / 11
1806-12-12	1 / 1	New York	2 / 2	1879-4-12	1 / 1	Monaco	11 / 11	Consultant	7 / 7
1810-4-22	1 / 1	Monaco	2 / 2	1881-7-25	1 / 1	London	3 / 3	Manager	5 / 5
1818-12-8	1 / 1	Constantine	1 / 1	1882-8-1	1 / 1	New York	2 / 2		

Recipe Step 9 - The Most Important!!



A Case Study

- Maria Comsa, PhD candidate Stanford
- French society theater in the 18th century
- Data: the people, locations, performances, and texts from society theatre;
- Visualise, explore, and augment the data to answer research questions;
- Identify trends that would not be evident otherwise;
- eg. Study the social composition of the network of people to see how many were part of the elite (aristocracy).
- Full review: <http://hdlab.stanford.edu/lab-notebook/palladio/2014/08/21/Comsa/>

What's Cool?

- Aesthetically stunning;
- Powerful tool and robust server;
- Evolving and growing;
- Combination of tools doesn't exist elsewhere;
- Directed to an academic audience;
- Free to use;
- You can modify appearance as you gain familiarity;
- Data is stored on your own service in your own space;
- It's OpenSource.

Why Palladio

- Wizard Driven;
- Powerful;
- Doesn't Require Server Technology;
- Browser Based;
- Allows focus on content not on the technology!

Where Else to Look

▸ RAW - densitydesign



BUILT ON D3.JS

Raw is an open web app to create custom vector-based visualizations on top of the amazing [D3.js library](#) through a simple interface.



HIGHLY CUSTOMIZABLE

Raw is an open and customizable project ([LGPL license](#)), and you can freely download it and modify it. If you want to contribute to its evolution, fork the project on [GitHub!](#)



YOUR DATA ARE SAFE!

Even though Raw is a web app, the data you upload will be processed only by the web browser. No server-side operations or storages are performed, no one will see, touch or copy your data!



EXPORT AND REFINE

Primarily conceived as a tool for designers and vis geeks, Raw allows to export visualizations in vector (SVG) or raster (PNG) format and embed them in your web page.

Summarising

- Flexibility
- Level of Development
- Cost
- Data Sharing
- Sustainability
- Ease of Use
- Extensibility
- Applicability

Upcoming Seminars

- 23 February - Sharing Your Digital Projects and Data:
Encouraging reuse, collaboration and research impact
using content management systems and digital
collections management systems
- 16 March - Mapping Time and Space using OKFN's
TimeMapper



Thanks

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digitalnomad.ie/exhibit-vs-palladio