Case Law Citation Timeline

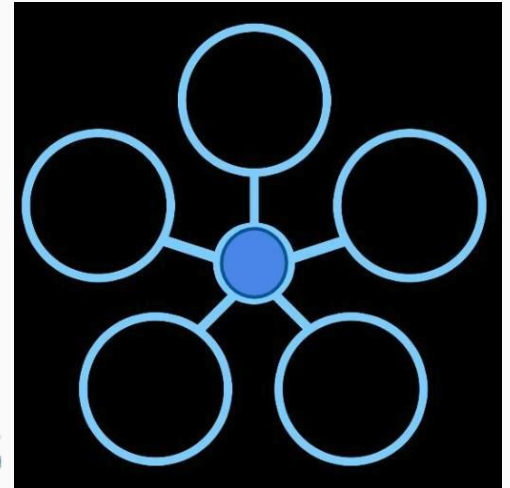Visualization

Ken Mansfield, Electrical Engineering

Goal

To create an animated timeline visualization of Judicial Case Law Citations.

Data is from Knomos API, parsed from BC Laws DB.

Visualized with d3.js in a browser.

Knomos

Law:

Citing cases which cite cases which cite cases....

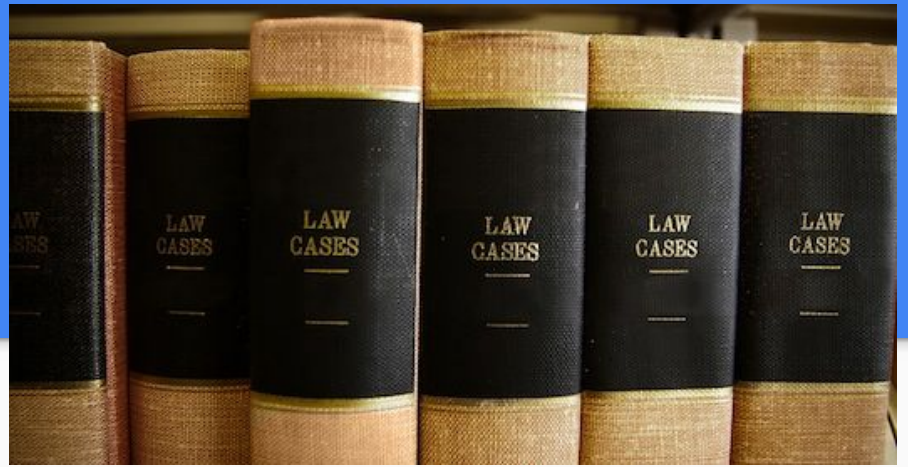To win a case you have to be good at citing the right cases.

If you are really good, your case will be **cited by** other cases.

Goal is to find Key Cases.

Slow Way

Read many Books?

1. Flip through pages to find a case.
2. Look for citations.
3. Look for each citation in other books.
4. Goto step 1 - repeat hundreds of times.

New (er) Way
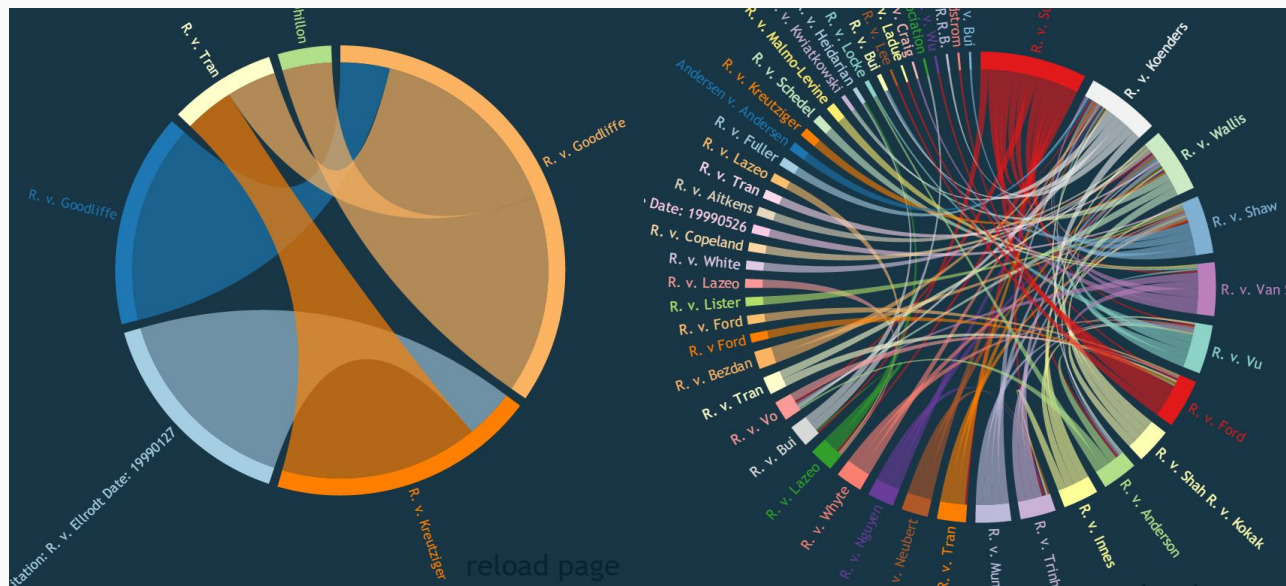
Do the same, but online.

click. click. click. 1 by 1.

Best Way: Timeline Vis

Changes right before your eyes!

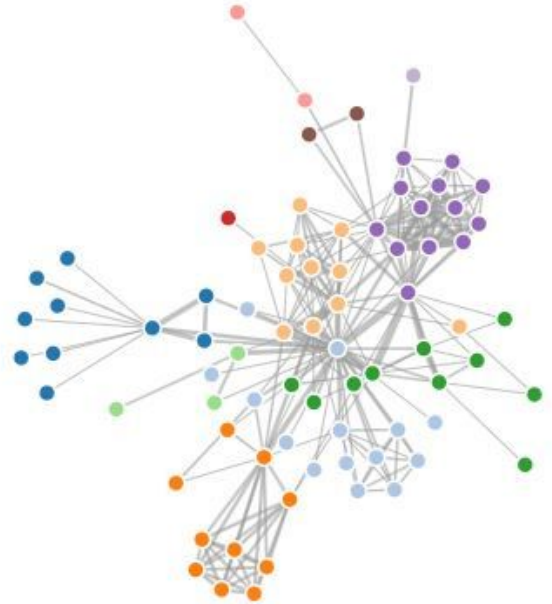All cases that cite that case or are cited by show up on a wheel.

Network

Citations can be thought of as a network structure.

Typically displayed using a node-link diagram:

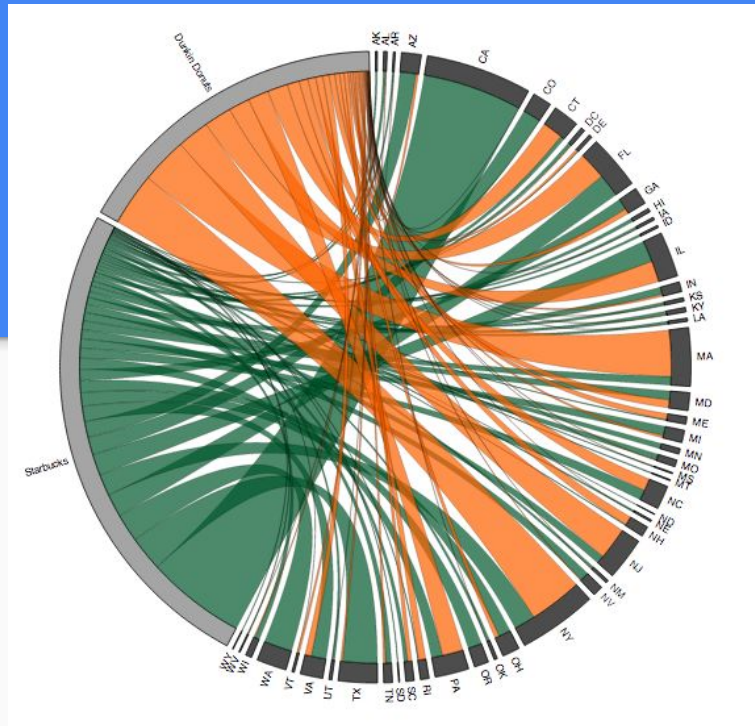This project I investigate using a Chord Diagram as an alternative.

What is it

d3 Chord diagram.

Many Ways to encode data:

Width: source chord. target chord. Arc

Colours: Source Arc Colour, Target arc Colour. Chord Colour.

Chord Diagram Matrix

The input of the Chord Diagram is a matrix ie:

To build, query: http://app.knomos.ca/api/cases/bcca/**2013/173**/citations

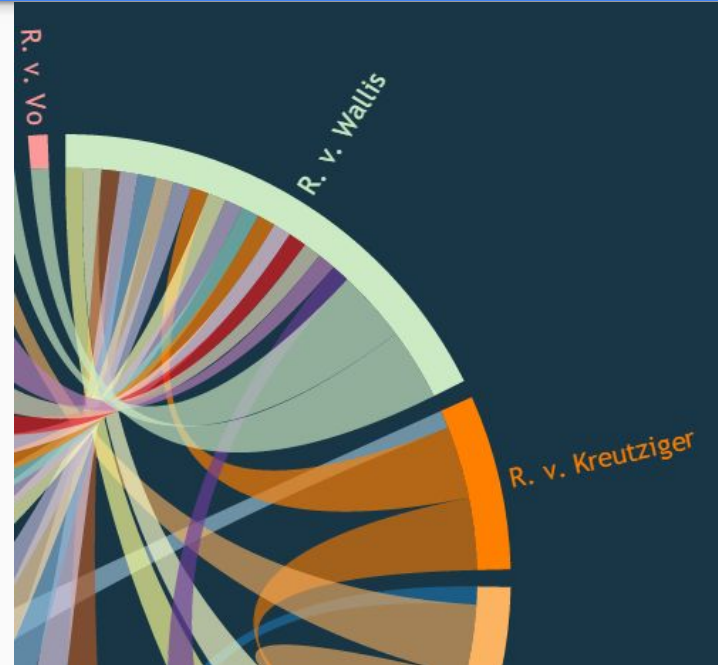For the case being searched, then recursively query each case that the case cites, or is cited by.

Case Law Citation Timeline Visualization

Each label is a case.

Chords with the same colour as the Arc indicate that they are being **Cited By** the case on the other end. They are also wider on that end.

Thin, different colour means it **Cites** case on other end.
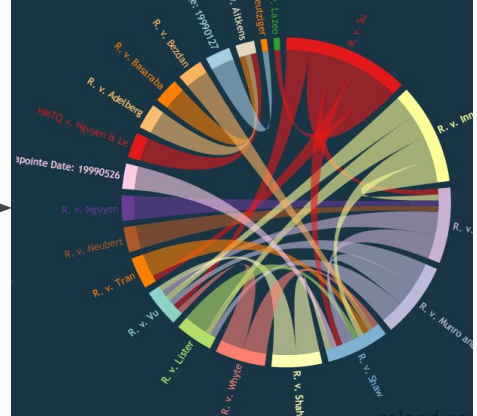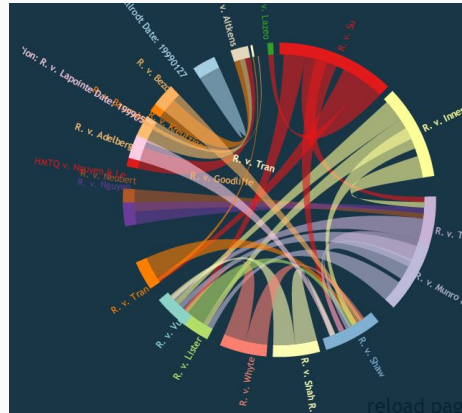
The changing width indicates directionality.

Shows citations changing over time.

2005-380

Has a slider that is used to animate the vis between years.
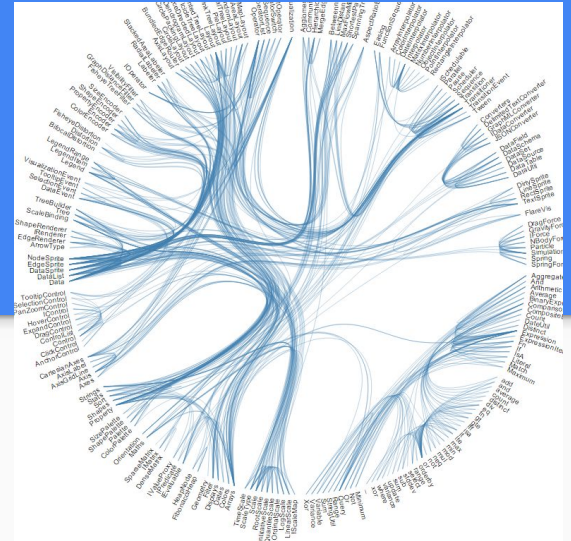
As well as a auto-play button.

Play Timeline

Questions + demo?

Alternatives: Hierarchical edge bundling:

Force Directed Layout: