Network Mapping

Choices

Vertices
- def of vectrices
- scale (e.g. State, County, city)

Edges
- Physical vs. logical
- inter vs. co citation
- observable? (indirectly observable)
- friendship

Important Questions

1. What type of measurements are vertices/edges base on?
2. Full or partial view of system
3. Was there sampling/missingness

Stage 2: Constructing Network Graphs

Commonly edges are dictated after processing measurements

- edges based on similarity

Stage 3: Goal is to embed a combinatorial object $G=(V,E)$ into two- or three dimensional Euclidean space

(Not unique or even well defined)

Common to better define/constrain the problem

- conventions (straight line edges)
- aesthetics (e.g. minimal edge crossing)
- Constraints (e.g. relative placement of vertices, subgraphs)

Common Methods for Graph Drawing

- Circular layout
- Spring - Embedder (sense of repulsion)
  - typically iterative processes that run in $O(N_V^2)$ time

(Look in notes)

- Decorating Graphs can be very useful

(Finish the Network Mapping Notes)