Readings Covered


Cushion Treemaps

- show structure with shading
- scale parameter controls global vs. local

Strength via Cycles

- 3-cycles through (u,v) + 4-cycles through (u,v)
- blue + 2 red edges == yellow nodes in both

Strength Metric

- strength: contribution to neighborhood cohesion
- calculate for each edge based on edge's POV partition of graph: one, other, both
Cycles: Cohesion Measure

- 3-cycles through u/v
  - blue + 2 red edges → yellow nodes in both existing yellow nodes
  - all possible all nodes

- 4-cycles through u/v
  - blue + 2 red + 1 green
  - blue + 2 red + 1 cyan

Strength

- 4-cycles [green edges]
  - one-both, other-both, one-other
  - \(s(M(u), W(u, v)) + s(M(v), W(u, v))\)

- 4-cycles [cyan edges]
  - both-both
  - \(s(W(u, v))\)

- 3-cycles [yellow nodes in both]
  - \(|W(u, v)| / (|M(u)| + |M(v)| + |W(u, v)|)\)

Hierarchical Decomposition

- remove low-strength edges
- maximal disconnected subgraphs
- quotient graph: subgraph = higher-level node

Hierarchical Quotient Graphs

- automatically determine how many clusters

Critique

- pros
  - exploit structure of data
  - hierarchical structure shown visually
  - automatically determine number of clusters
  - nifty math

- cons
  - information density could be better
  - what if mental model doesn’t match clustering metric?

Previous: Multilevel Call Matrices

Previous: EdgeLens

Previous: Visual Access Distortion

Previous: H3

Previous: TJ