Abstract

- Arguments are structures of premises and conclusions that underpin rational reasoning processes.
- Visualisation tools have been developed to support argument analysts and help them to work with arguments.
- Larger argument dataset presents problems for the current generation of argument visualization tools.
- We propose a tool for interacting with argument corpora that enable users to explore and understand the reasoning structure of large-scale arguments.

Visualization Approach

- Present large-scale of argument
  - Radial adjacency layout
  - Quick navigating for the whole structure
  - Fisheye technique
  - The ability to save and share the argument’s graph with others
  - Using D3 and argument international format (AIF)

Argument Visualization Layout

- Indented Layout: Shows the hierarchical structure of the argument, Space-inefficient, Fails to provide an overview of the whole structure
- Node-link Layout: Shows the hierarchical structure of the argument, Relationships between the nodes are clear and straightforward, Space-inefficient
- Nested Layout: Provides an overview of the whole structure, Space-efficient, It is difficult to explore the relations between the nodes
- Matrix Layout: Avoids edge crossing and nodes overlapping, It’s hard to track the relations between the nodes

Methodology

- Interviews with experts
- From literature review

User Requirements
- Data/Operation Design
  - Tasks
  - Data

Evaluation
- Encoding Techniques
  - Layout
  - Interaction

Conclusion

We propose an argument visualization tool that can usefully handle arguments at increasing scale. This will help stakeholders to reach decisions by enabling them to navigate through arguments, explore logical reasons, and understand relations between arguments. Stakeholders may include policy and health analysts, academics, and employees, etc.