Problem Space
Considering node and edge attribute visualization is crucial for many network exploration and analysis tasks. However, effective visualization of both structure and attributes is a challenging problem, especially for dense graphs. To address this challenge, we introduce TaMax, a novel technique designed to visualize dense multivariate graphs with a diverse set of node and edge attributes.

Table View
Node attributes are visualized in the table view where the rows represent nodes and their attributes are visualized in the columns.

Matrix View
The network topology is shown in an adjacency matrix.

Supported Operations
- **Sort**: the rows and columns can be sorted based on the node attributes
- **Attribute Derivation**: new attributes can be derived based on current attributes
- **Filter**: can be applied to both nodes and edges based on attributes
- **Group**: flexible grouping based on both numerical-categorical node attributes
- **Reorder**: reorder matrix based on numerical edge attributes

Visualizing Edge Attributes
- **Division Approach**: Each matrix cell is divided into n subcells and the attributes are visualized in them using a variety of different visual encodings: bars, doughnut charts, histograms, nested rectangles.
- **Overlay Approach**: Display two encodings on top of each other. The secondary encoding is achieved by overlaying a transparent rectangle, proportional to a numerical value such as edge counts.