Visualizing a SAP Network

Vaden Masrani
• **Why**: To help SAP developers understand the structure of their system in order to find inefficiencies and direct test suites.

• “What programs are underperforming?”
• “What programs will be affected if I change X?”
• “Is this duplicate code?”
• “What items haven’t been used recently?”
• **What**: Network data with nodes, links, and attributes

• **How**: Interactive arc diagram

• “No unjustified 2D”
<table>
<thead>
<tr>
<th>ID</th>
<th>Group</th>
<th>Performance</th>
<th>Usage</th>
<th>Lines of Code</th>
<th>Database Rows</th>
<th>Violation Density</th>
<th>Creation date</th>
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<td>What: Data</td>
<td>Node/Link data; quantitative, ordinal and categorical attributes</td>
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<td>Why: Tasks</td>
<td>Find extremum, find outliers, compare network topology, find similar items</td>
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<tr>
<td>How: Encode</td>
<td>Arc diagram layout, colour encodes type, size encodes user-selected quantitative attribute</td>
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<td>How: Facet</td>
<td>Arc diagram faceted with a table and control panel</td>
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<td>How: Manipulate</td>
<td>Zoom, pan, select</td>
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<td>Scale:</td>
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<td>Technical</td>
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Lessons / Limitations

- Rapid prototyping vs performance vs elegance vs robustness
- Incomplete dataset
- Develop using dataset of correct scale… :/
- HTML5 Canvas vs SVG elements
- Lack of users
From here

• Integrate into existing CodeExcellence toolkit
• Test with real users and real data
• Clean up code and improve performance
• Scented widgets / improve search / arc direction
• Brush export