



## Ego Network Report

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<http://www.casos.cs.cmu.edu/>



## Overview

- What is an Ego network?
- Examples of Ego network data
- Extracting Ego networks from a meta-network
- Analyzing one, two, or multiple Ego networks



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## What is an Ego network?

- Ego network contains:
  - Ego node itself
  - Nodes directly connected to the ego (called alter nodes)
  - Links between the ego and alter nodes
  - Links between alter nodes

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## Analysis Use-Case

- When we want to analyze the Ego networks for nodes within a single meta-network
- Run the Ego Net report to automatically extract the Ego networks and measure them
- Extract the Ego networks from the main menu in ORA:
  - Generate Networks → Ego Network Generator
  - Run other reports as needed on the individual Ego networks

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## Load Software Company

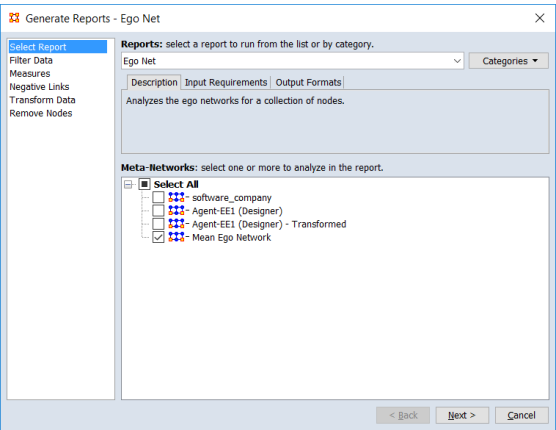
- Load the Software Company dataset:
  - We could ask questions: what is direct linkage of the LDR to the rest of the software company?
  - How do the two managers Mgr1 and Mgr2 compare in terms of their ego networks?
    - Do they overlap in agents, knowledge, tasks?
    - How do they most differ?
  - What knowledge and tasks do Engineers share on average? What knowledge and tasks do at least half of the engineers connect to?
- Answer these questions using the Ego Net report running in Single, Comparison, and Multi-Mode

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## Ego Net Report

- We will first run the Ego Net Report on a single node: LDR



Generate Reports - Ego Net

Select Report: select a report to run from the list or by category.  
Ego Net

Description | Input Requirements | Output Formats  
Analyzes the ego networks for a collection of nodes.

Meta-Networks: select one or more to analyze in the report.

- Select All
- software\_company
- Agent-EE1 (Designer)
- Agent-EE1 (Designer) - Transformed
- Mean Ego Network

< Back Next > Cancel

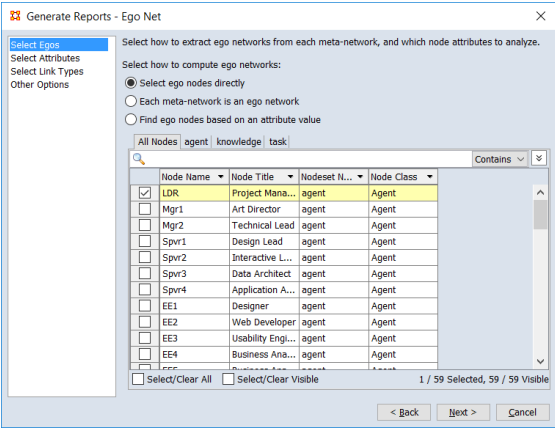
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## Ego Net Report: Single-Mode

- Select the LDR Agent to analyze:



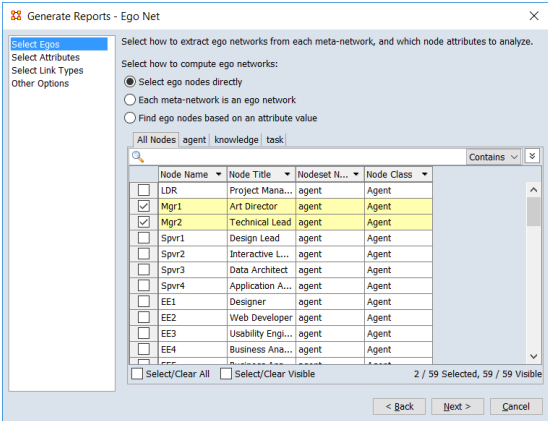
| Node Name                           | Node Title | Nodeset N...      | Node Class  |
|-------------------------------------|------------|-------------------|-------------|
| <input checked="" type="checkbox"/> | LDR        | Project Mana...   | agent Agent |
| <input type="checkbox"/>            | Mgr1       | Art Director      | agent Agent |
| <input type="checkbox"/>            | Mgr2       | Technical Lead    | agent Agent |
| <input type="checkbox"/>            | Spvr1      | Design Lead       | agent Agent |
| <input type="checkbox"/>            | Spvr2      | Interactive L...  | agent Agent |
| <input type="checkbox"/>            | Spvr3      | Data Architect    | agent Agent |
| <input type="checkbox"/>            | Spvr4      | Application A...  | agent Agent |
| <input type="checkbox"/>            | EE1        | Designer          | agent Agent |
| <input type="checkbox"/>            | EE2        | Web Developer     | agent Agent |
| <input type="checkbox"/>            | EE3        | Usability Engi... | agent Agent |
| <input type="checkbox"/>            | EE4        | Business Ana...   | agent Agent |

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## Ego Net Report: Comparison Mode

- Two compare two ego networks, select Mgr1 and Mgr2 to analyze:



| Node Name                           | Node Title | Nodeset N...      | Node Class  |
|-------------------------------------|------------|-------------------|-------------|
| <input type="checkbox"/>            | LDR        | Project Mana...   | agent Agent |
| <input checked="" type="checkbox"/> | Mgr1       | Art Director      | agent Agent |
| <input checked="" type="checkbox"/> | Mgr2       | Technical Lead    | agent Agent |
| <input type="checkbox"/>            | Spvr1      | Design Lead       | agent Agent |
| <input type="checkbox"/>            | Spvr2      | Interactive L...  | agent Agent |
| <input type="checkbox"/>            | Spvr3      | Data Architect    | agent Agent |
| <input type="checkbox"/>            | Spvr4      | Application A...  | agent Agent |
| <input type="checkbox"/>            | EE1        | Designer          | agent Agent |
| <input type="checkbox"/>            | EE2        | Web Developer     | agent Agent |
| <input type="checkbox"/>            | EE3        | Usability Engi... | agent Agent |
| <input type="checkbox"/>            | EE4        | Business Ana...   | agent Agent |

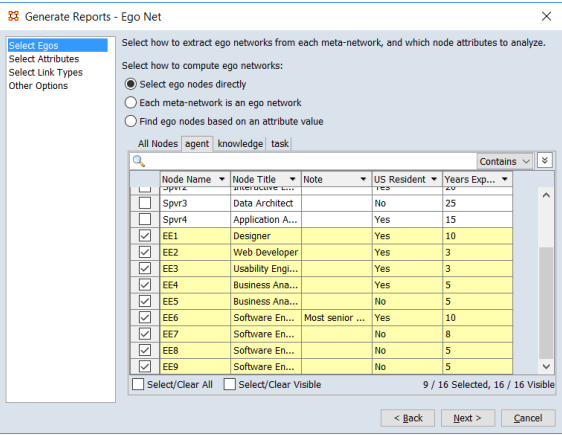
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## Ego Net Report: Multi-mode

- To compare all engineers, select all engineers:



| Node Name | Node Title        | Note            | US Resident | Years Exp... |
|-----------|-------------------|-----------------|-------------|--------------|
| Spvr3     | Data Architect    |                 | No          | 25           |
| Spvr4     | Application A...  |                 | Yes         | 15           |
| EE1       | Designer          |                 | Yes         | 10           |
| EE2       | Web Developer     |                 | Yes         | 3            |
| EE3       | Usability Engi... |                 | Yes         | 3            |
| EE4       | Business Ana...   |                 | Yes         | 5            |
| EE5       | Business Ana...   |                 | No          | 5            |
| EE6       | Software En...    | Most senior ... | Yes         | 10           |
| EE7       | Software En...    |                 | No          | 8            |
| EE8       | Software En...    |                 | No          | 5            |
| EE9       | Software En...    |                 | No          | 5            |

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## Ego Net Report: CSV Output

- The CSV output of the report contains a spreadsheet of all measures computed across all selected meta-networks

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