

Status Report

[2014-8-18]

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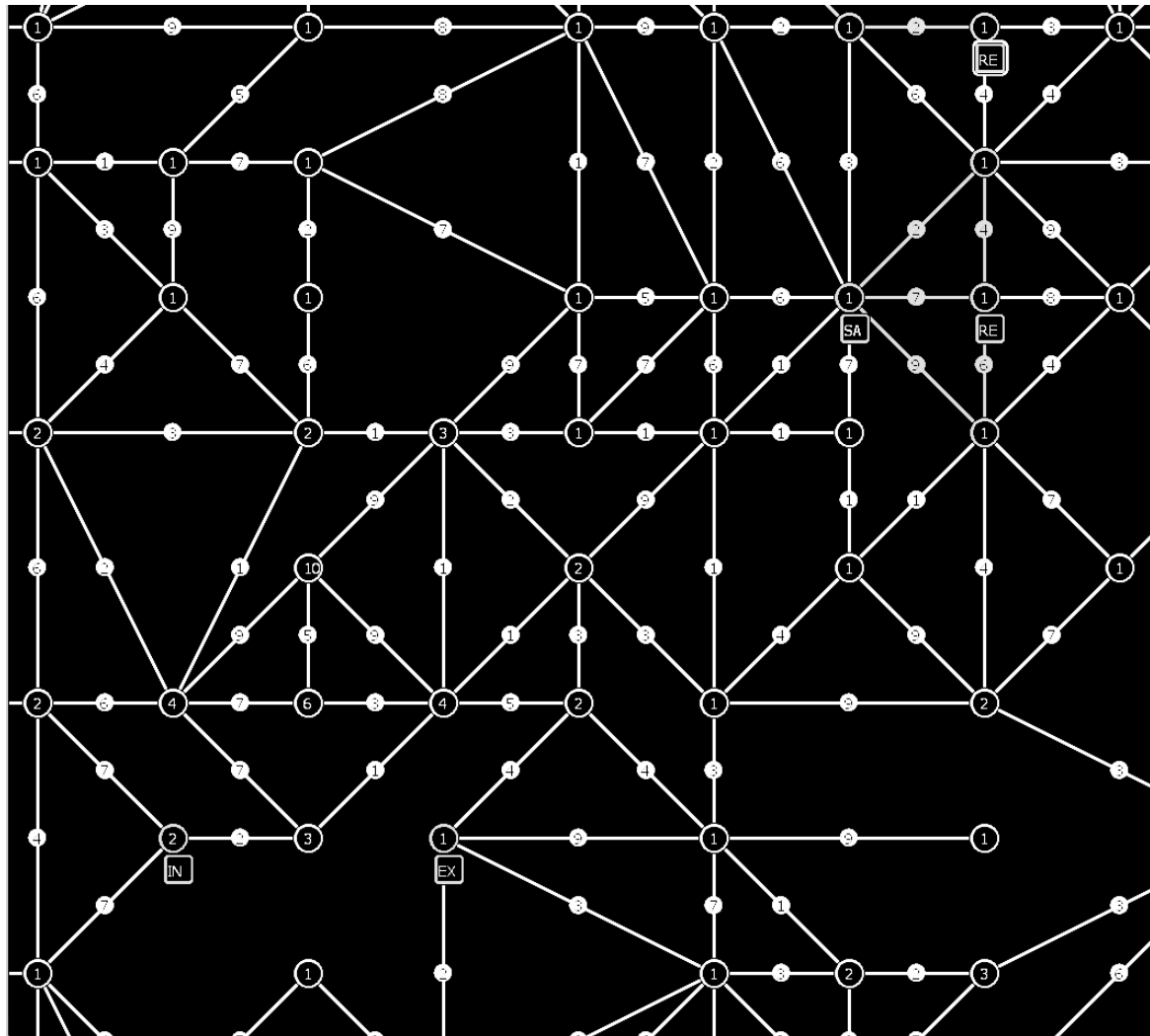
Research lab – Summer term 2014

University Koblenz-Landau

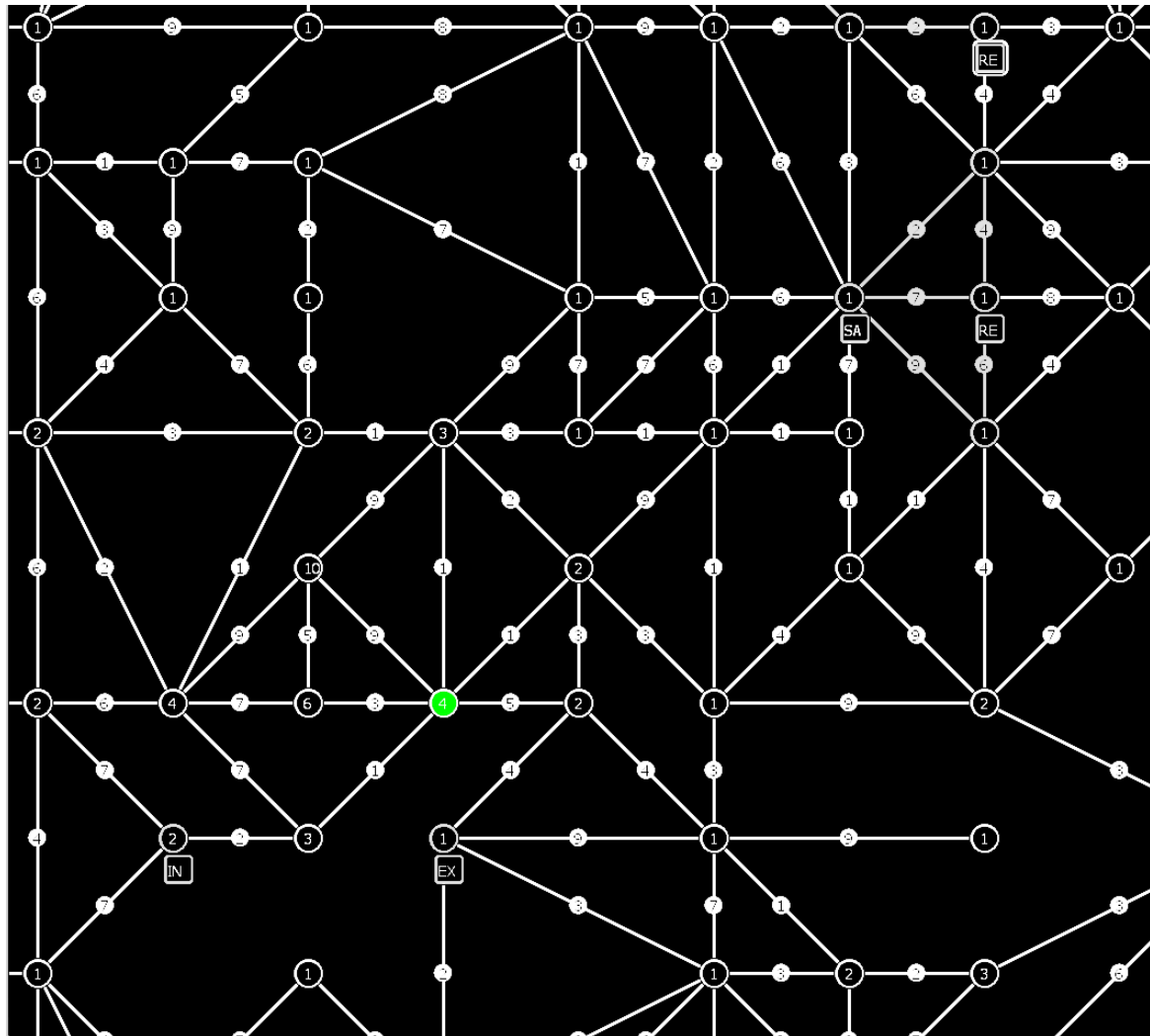
Zoning

- Each node agent calculates his best zone (2-hop neighbors)
- Best means highest zone value with minimal number of agents.

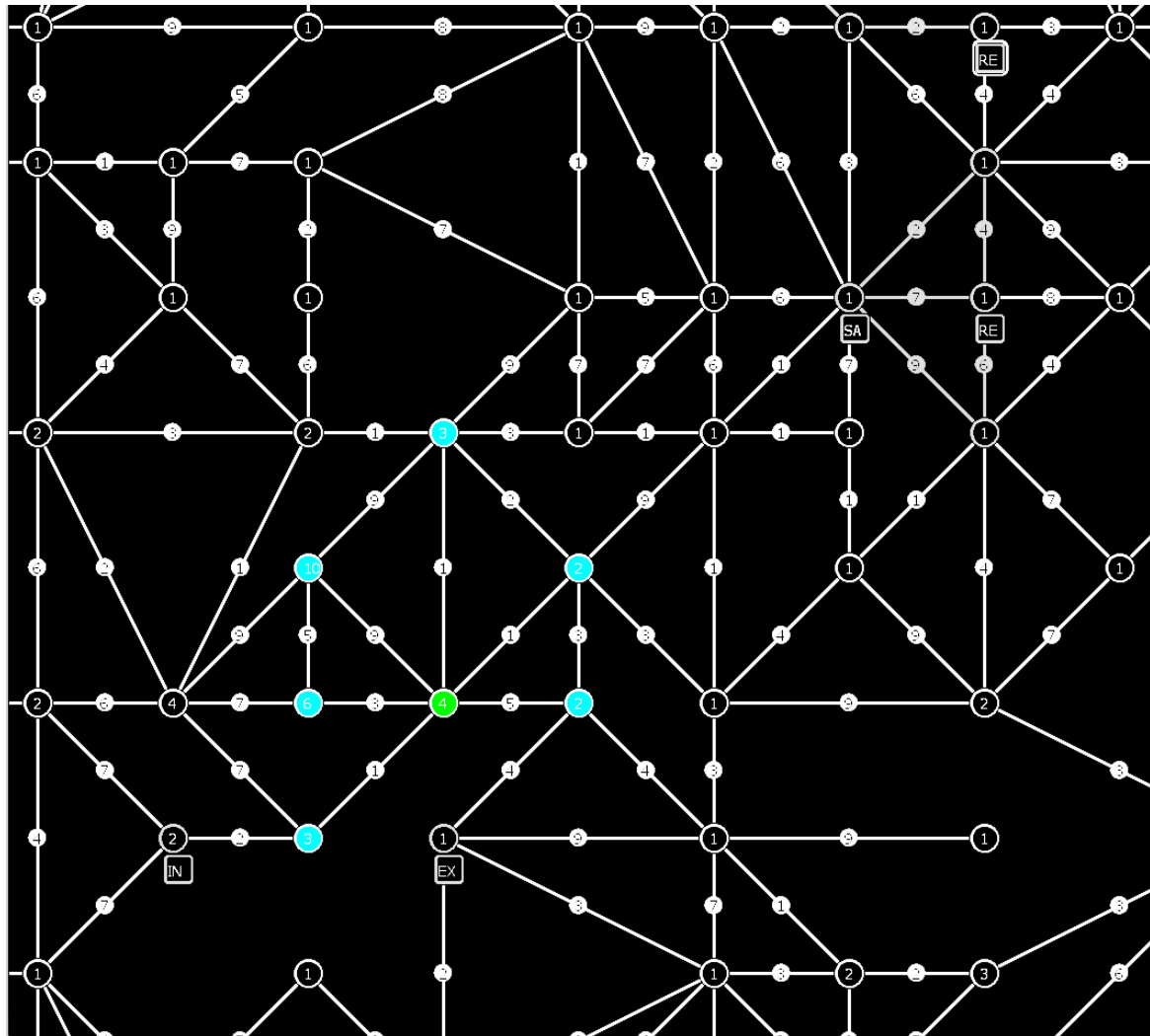
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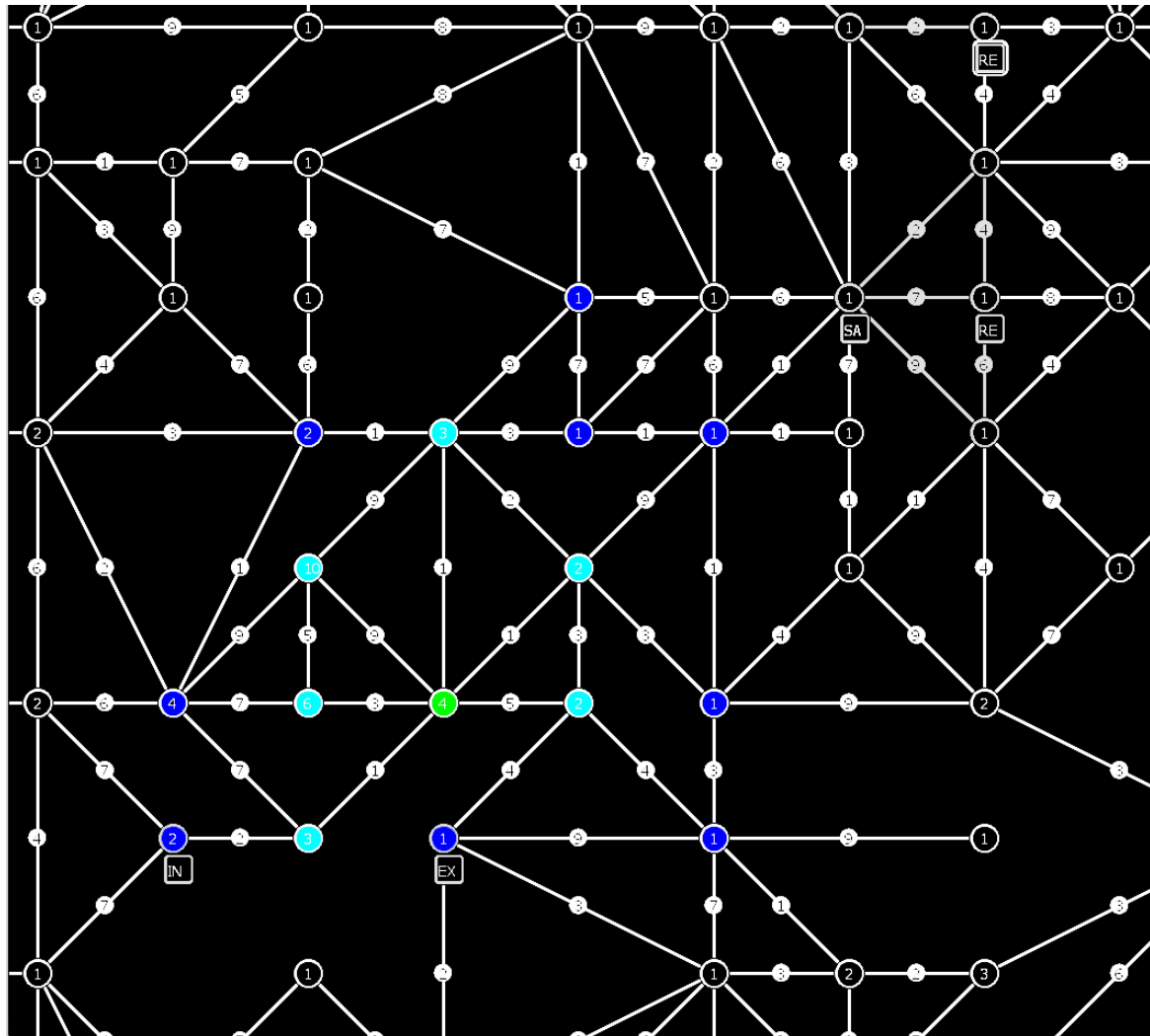
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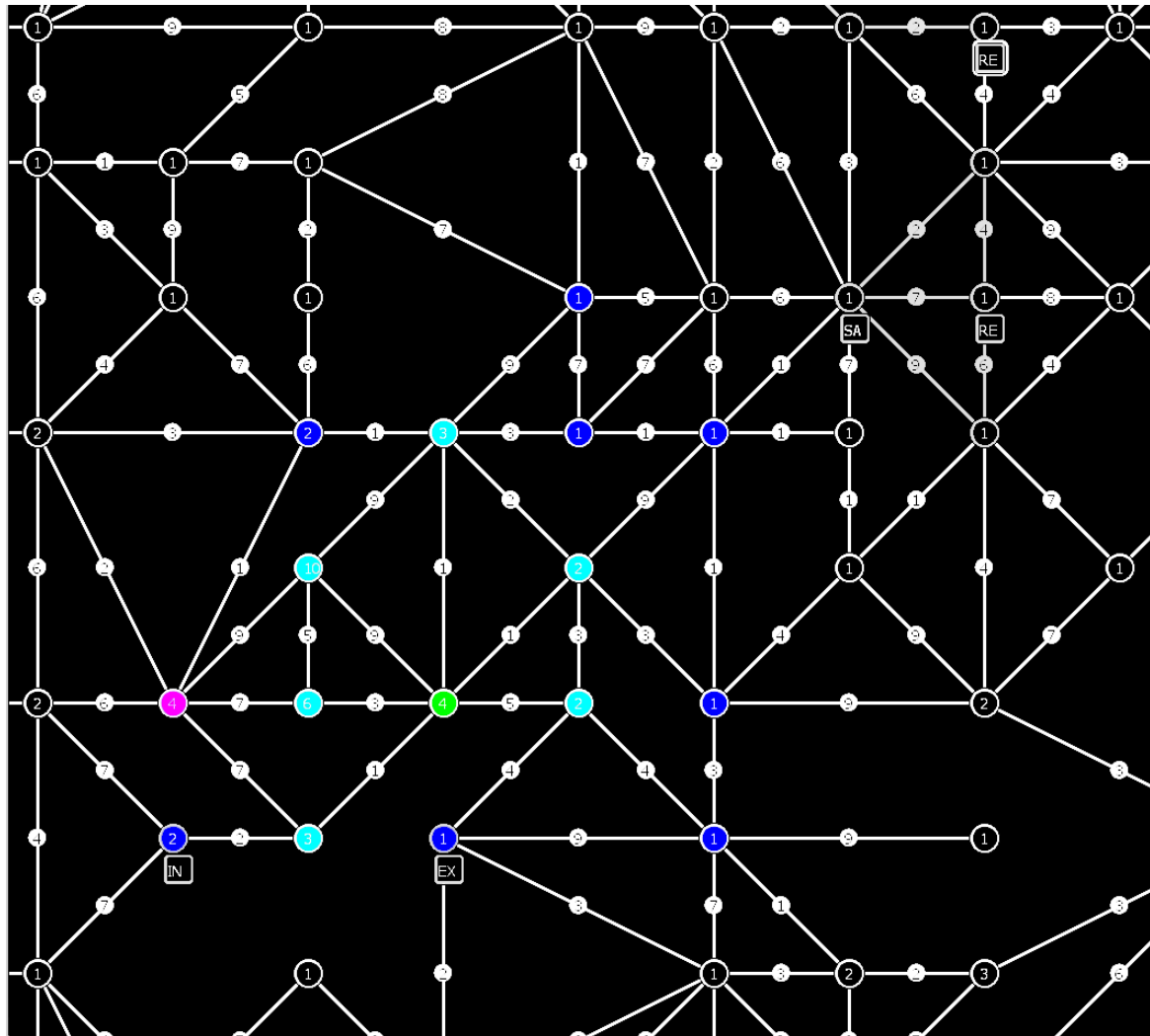
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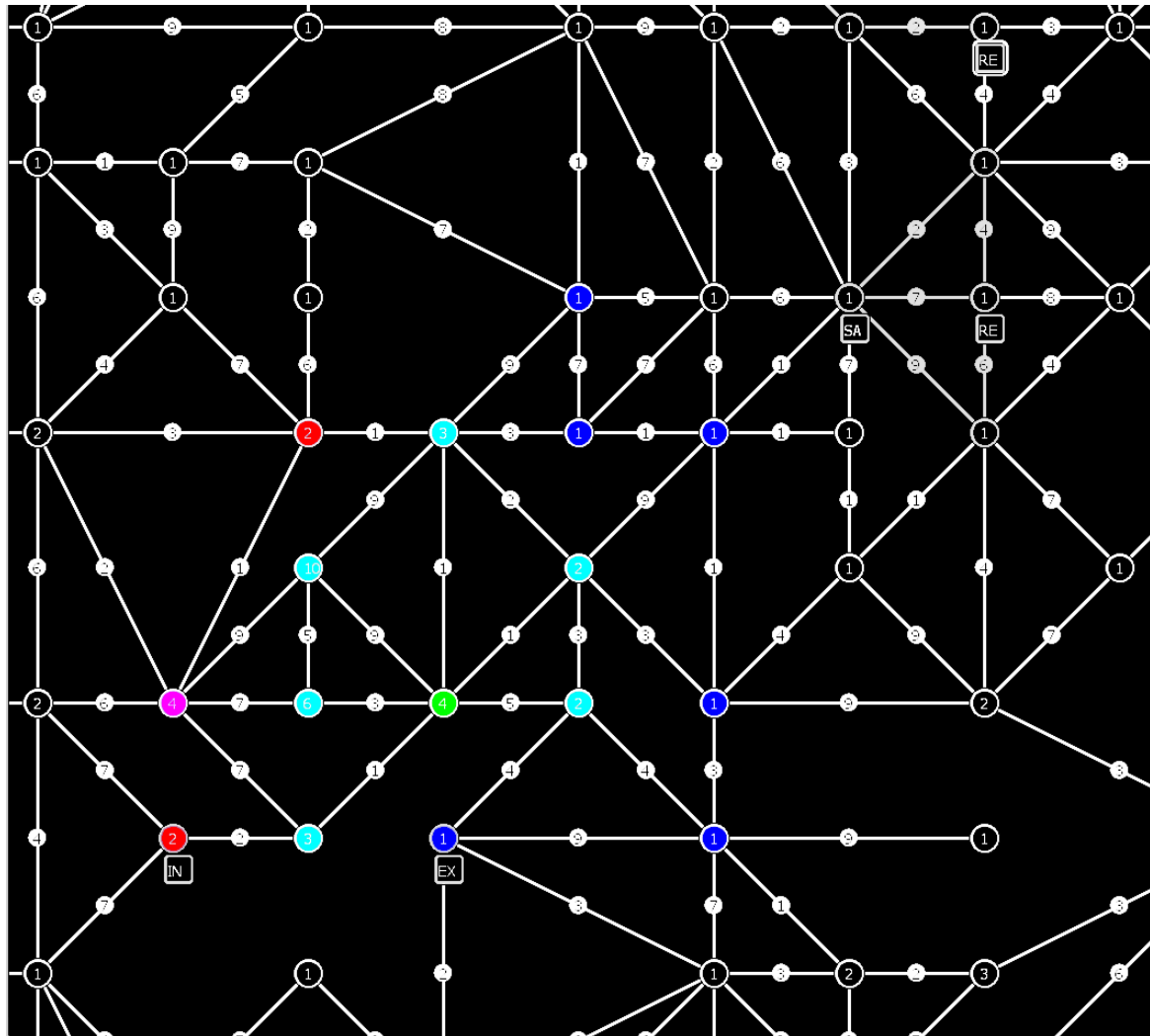
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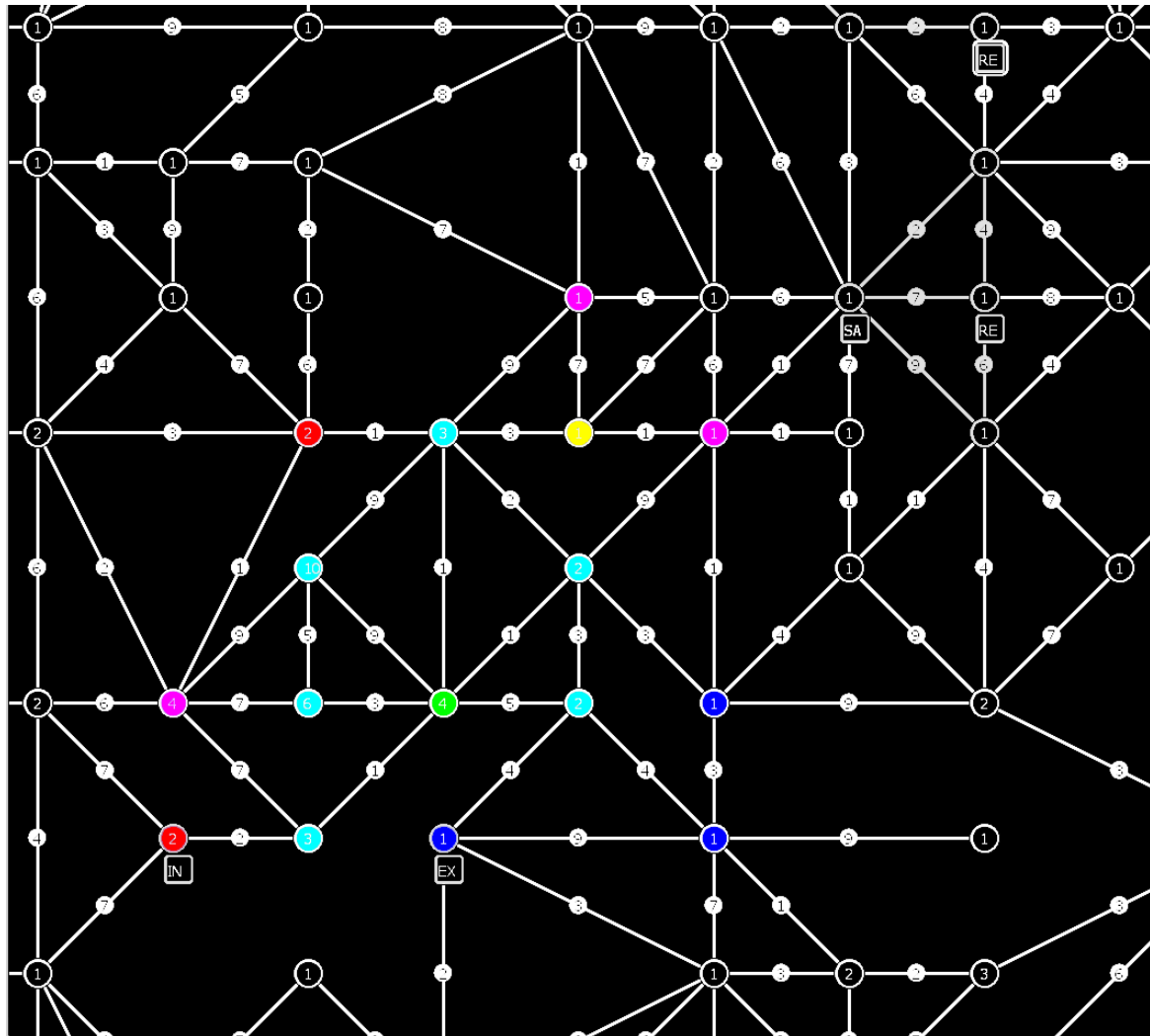
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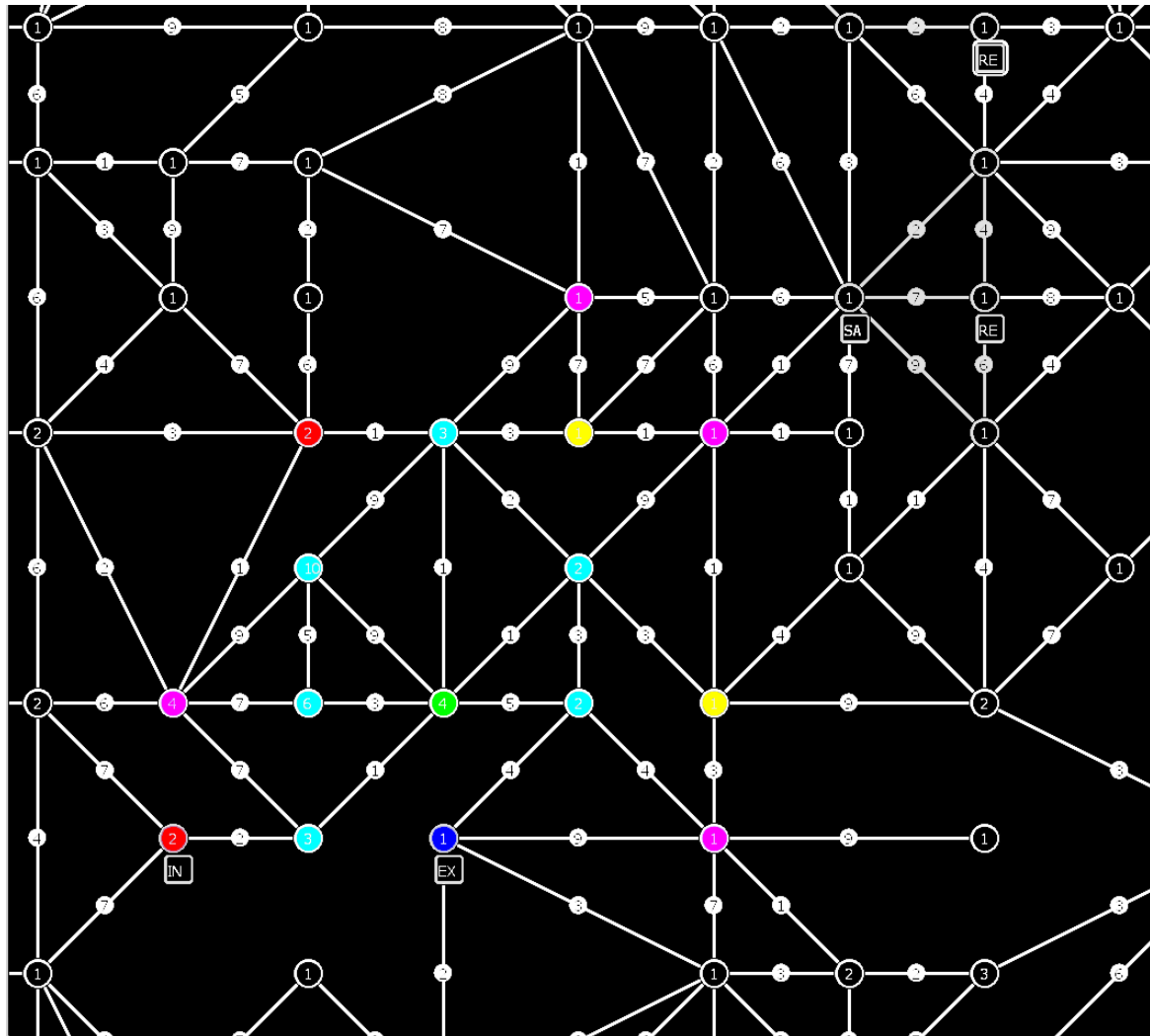
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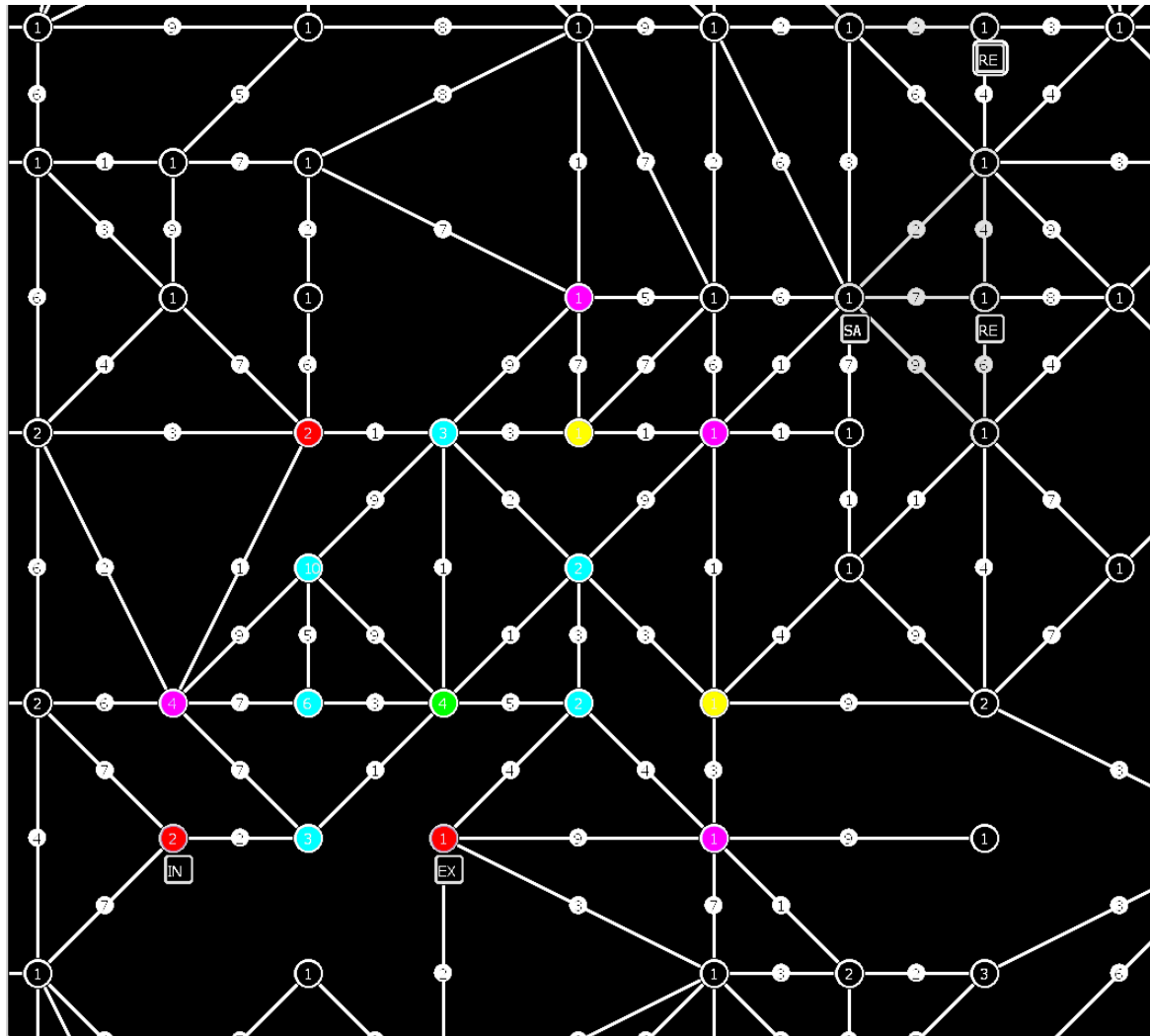
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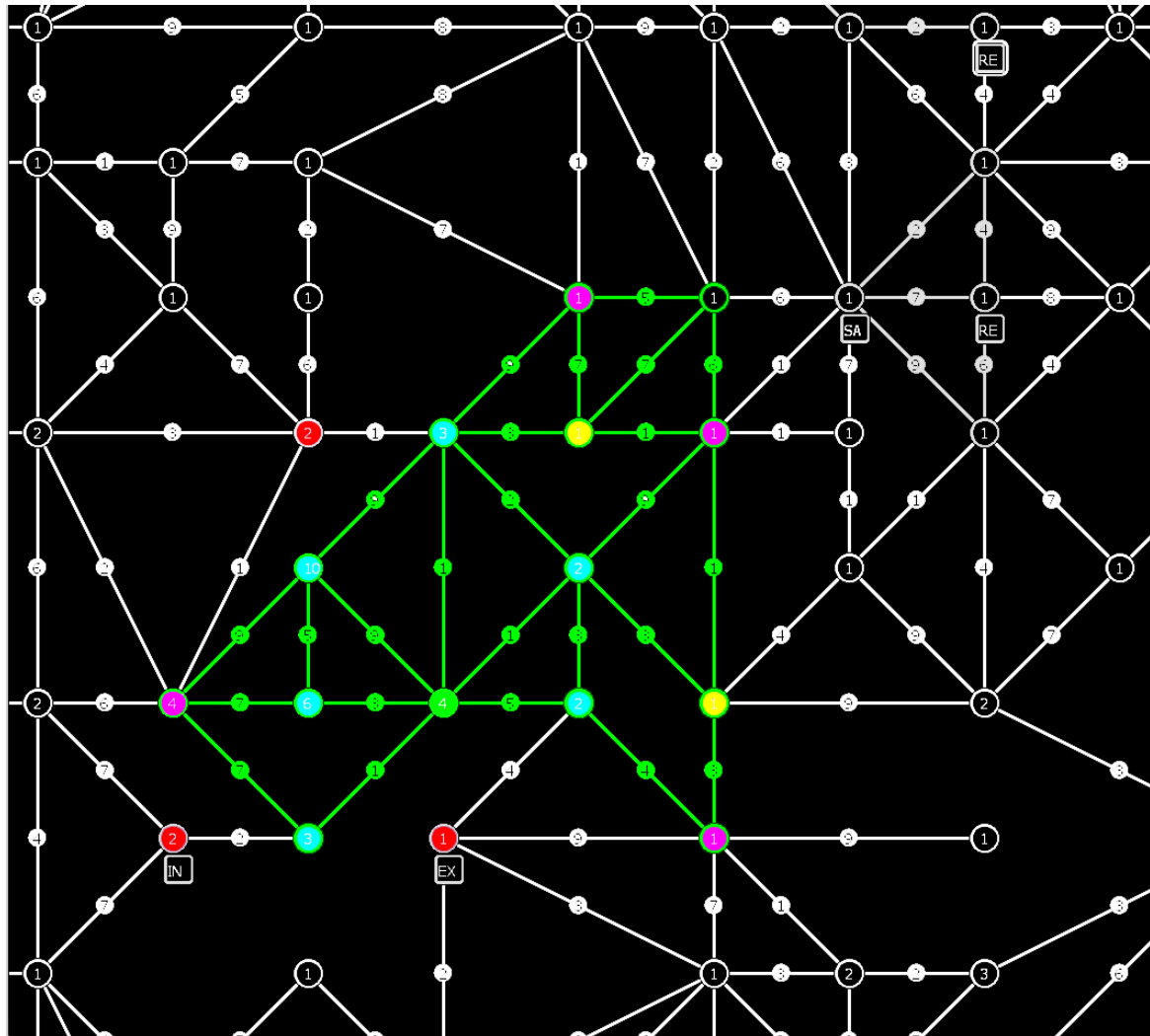
Zoning



Zoning



Zoning



Build Zones

- Each agent determines his best zone in his 1-hop neighborhood and broadcasts the value to all the other agents.
- After that he waits for all the others to tell him what their distance is to that particular zone.
- The agent chooses the agents which he wants to gather to build the zone.

Build Zones

- Agents reply with 'yes' or 'no'
- Yes, if the zone is the best for this agent
- Calculate best zone: use heuristic (takes zone value, the distance that needs to be travelled into account)
- If some agents reply with no the asking agents will ask other agents which are more far away.

Build Zones

- If an agents says yes to another agent he commits himself to this zone.
- If the asking agent is able to get as much commitments as he needs to build his zone, he will assign a node where the others have to go to, according to their current position.
- If the asking agent cannot get as many agents as needed he will give up in building this zone and will be free/available for other zones.

Probing

- The strategy for the explorers will be to probe nodes which are connected to most already probed nodes.
- -> probe clusters of nodes instead of probing nodes on a 'straight' path. That's important because we will then have clusters/zones with high values (because all nodes are probed).

Attacking

- Our saboteurs should only attack if he receives a visible entity percept.
- Then he should attack (also as a ranged action).
- If the attack fails and the enemy agent moves away we want to follow him.

Repairing

- If an agent gets disabled we first want to check if a repairer is free, which means that he is not committed to any zone.
- If that's the case the repairer will move to the disabled agent and will repair the disabled agent.
- If all repairers are already committed to a zone the disabled agent will move to the closest repairer.