

# Status report

14.07.2014

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Research lab – Summer term 2014

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# High level view on the strategy

1. Explore the map until either
  - We surpass a fixed amount of knowledge (e.g. 95%) or
  - We have already spent a long time (e.g. 100 steps)
2. Start building small zones

# Exploration strategy

## Current status

- Agents move via DFS on the map
  - They go to an adjacent unvisited node using the cheapest available edge
- If multiple agents want to move to the same node, they bid for it

# Exploration strategy

## Current status

- Agents survey their current node
- In parallel, this information gets modeled through NodeAgents via DSDV
  - They build tables of shortest paths (fewest steps)
  - In theory, they could also build tables of cheapest path (fewest costs)

# Exploration strategy

## Current status

- Explorers probe every unprobed node they get to
  - This information is later used for zone calculation
- Saboteurs attack visible enemies
- Capable agents parry when they see an enemy

# Exploration strategy

## Ideas for improvement

- When some agents finish exploring earlier, they should go to the nearest unvisited node and continue exploration
- Repairers should travel to nearby disabled agents and repair them

# Exploration strategy

## Ideas for improvement

- Trigger actions on percept events instead of step
- Exploring should perhaps be done after the map exploration or just not regularly (e.g. every third step).

# Zoning strategy

## Current blueprint

- Our NodeAgents each each calculate the most valuable zone around them
- Nodes inside of circular zones should be ignored in favour of processing power
- NodeAgents should bid for  $n$  best zones
  - Bid calculation:  $\frac{\text{zone score}}{\text{amount of needed agents}}$



# Zoning strategy

## Current blueprint

- NodeAgents should have a separate table for zone calculation
- There, we reuse the information from probing and the steps information calculated via DSDV:

```
minStepsPath (DestinationId,  
              HopId, Steps, HopCost)
```

# Server/Requests

- The server should have `git` installed
- Hopefully, the server won't need X
- We will probably need more CPUs

# Current schedule

- Soon: Testing phase
- Beginning of July: Fixed contest parameters
- 2014-09-01+: Qualification
- 2014-09-07+: Tournament
- 31.10.2014: Final report deadline

Thanks for your attention!