Solving Sum-of-Costs Multi-Agent Pathfinding with Answer-Set Programming

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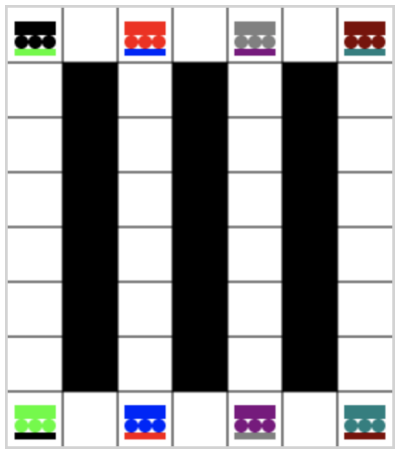

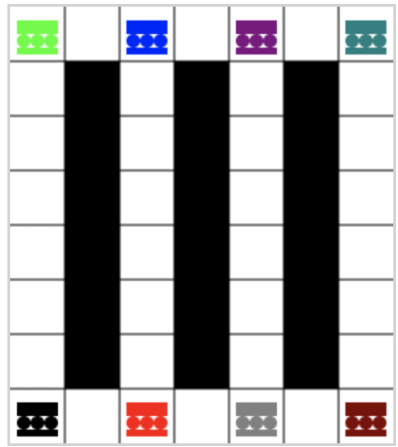

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Multi-Agent Pathfinding via ASP

- First encoding of sum-of-costs MAPF to ASP
- **Great**: in highly congested maps:
  - we outperform:
    - SAT-based solvers
    - heuristic-search-based solvers
- **Key**: a **linear** encoding for conflicts
- **Interesting**: encoding of the optimization
- **Unglamorous:**
  - outperformed on "easy" problems
  - does not scale to large maps