

Peer Review

Review of: "Enhancing Lifelong Multi-Agent Path Finding with Cache Mechanism"

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Overall, I think this manuscript is well written in terms of structure, organization, and wording. One weak point is about the “contribution”; I think the authors should make it clearer about the motivation, necessity, and advantages of integrating cache layout design with pathfinding. Other detailed concerns are listed as follows:

Detailed concerns:

1. I know one highlight of this work is to consider cache map layout design when optimizing agent path. I believe the authors should clarify what differences it makes to integrate these two things.
2. There is a statement in subsection “Task Assigner”: “If not, the TA assigns the item’s shelf location to the agent, followed by a location in a cache grid where the items can be stored. Once the items are stored in the cache, the agent can transport one item to the unloading port.” I am wondering if it is allowed to directly deliver items from the shelf to the unloading port.
3. For Figure 2, it would be better for understanding if the condition for each state transition could be added to this figure.
4. The authors list several cache replacement policies in subsection “Test Settings”. However, I did not see any detailed description of these policies.

Declarations

Potential competing interests: No potential competing interests to declare.