**MOTIVATION**

- Path planning for **coverage** is integral to numerous applications in AI and Robotics.
- With improvements in computing power and sensing systems, it is common for multiple agents to **cooperate** and achieve a goal.
- We present the problem of **persistent coverage** for multiple energy-constrained UAVs in a discrete environment where each target cell has a **different visitation frequency**.

**PROBLEM DEFINITION**

- Consider \( m \times n \) grid cells that need to be efficiently monitored by \( N \) UAVs. A visitation frequency \( f_{i,j} \) implies that cell \((i, j)\) should be revisited after every \( f_{i,j} \) time steps.
- Each UAV must travel to a cell via an optimal path while maintaining a minimum number of bad cells at any time. A cell is bad if it has been neglected by all UAVs.

**CONTRIBUTIONS**

- Presenting the problem of multi-agent persistent coverage for multiple target visitation frequencies.
- An algorithm to generate feasible plans.
- A **custom visualization framework/GUI** built using Qt Graphics.

**REFERENCES**


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