Stay off the lawn!

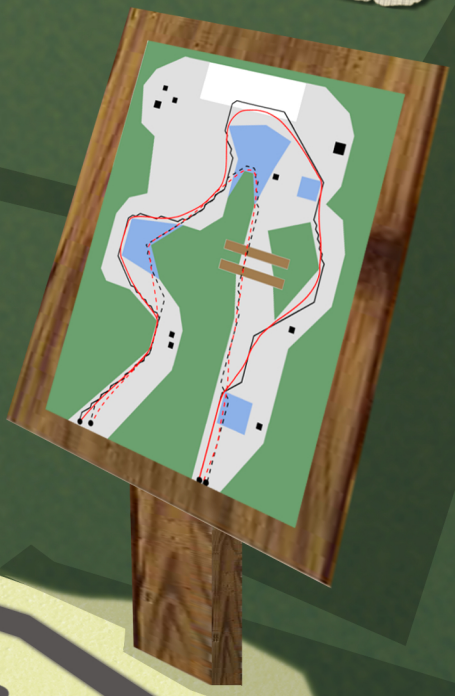
Creating smooth paths based on region preferences

Modern virtual environments can contain a variety of agents and traversable regions. Each agent may have different preferences for the traversable region types. Pedestrians may prefer to walk on sidewalks, but they may occasionally need to traverse roads and dirt paths. By contrast, wild animals might try to stay in forest areas, but they are able to leave their protective environment when necessary.

Our novel path planning method

MIRAN - Modified Indicative Routes and Navigation

takes an agent's region preferences into account. MIRAN efficiently computes a visually convincing path that is smooth, keeps clearance from obstacles, avoids unnecessary detours, and allows local changes to avoid other agents.



- **Step 1:** Compute reference point
- **Step 2:** Compute candidate attraction points
- **Step 3:** Pick best candidate point
- **Step 4:** Move towards attraction point



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