

Preamble:

We present six different simulations of a combat encounter. The rules are a simple form of hide-and-seek. In the simulations, the drone – the aerial Member – and the man wearing the green t-shirt – the ground member – form a team. They work together to target their opponent, who wears a red t-shirt.

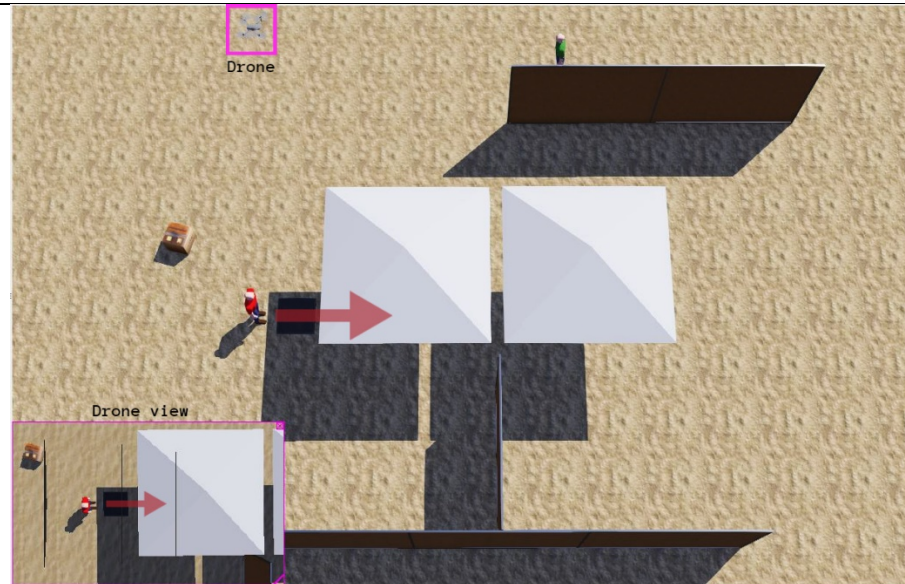
Each of the six scenarios is illustrated below, with each showing the initial and final situation for that scenario. The final situation shows the environment state after the drone makes its decision. It chooses from three options: to stay, to move, or to give advice to the ground team member.

The illustrations also show the drone camera view (with pink boxes for the drone and the drone view) and a prediction of the behaviour of the ground team member and of the opponent (red arrows show the predicted movement).

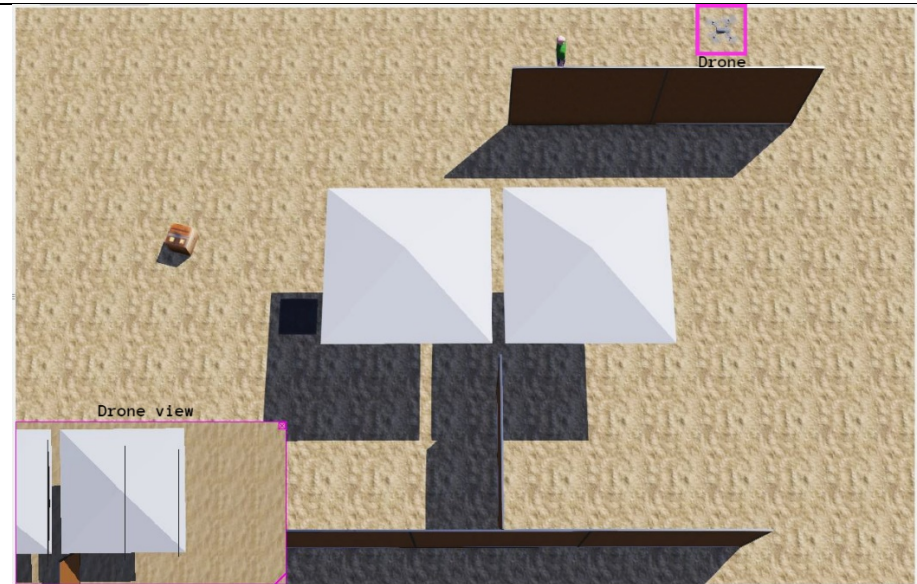
The drone bases its decision on its view of what the ground team member and the opponent are doing.

Scenario 5: Drone moves actively looking for opponents.

Initial situation



Final situation



Question (for the drone): Why did you move to the right?

Explanation: I moved to the right of the gazebos because I predict the teammate will not move from their position and, based on the previous opponent's behaviour, I predict the opponent will exit from the gazebos to the right. Therefore, I have a higher probability to target the opponent from that position when exiting the gazebos.