

# MAPF Output File Format (JSON)

## ***actionModel (String)***

The name of the action model used for the robots in the simulator. Always "MAPF\_T" indicating MAPF with Turnings (robots can face 4 directions and actions include forward, clockwise turn, counter-clockwise turn, and wait).

## ***AllValid (String)***

Either "Yes" or "No", describing whether all actions returned by the planner are valid.

## ***teamSize (Int)***

The number of robots in the simulation.

## ***start (List)***

A list of start locations. The list's length equals the number of robots.

## ***numTaskFinished (Int)***

Number of tasks that have been finished.

## ***sumOfCost (Int)***

The sum of individual path costs.

## ***makespan (Int)***

The maximum time taken by any robot to complete its task.

## ***actualPaths (List)***

List of n strings (n = number of robots). Each string represents a sequence of action symbols separated by commas. Symbols: 'F'=Forward, 'R'=Clockwise rotate, 'C'=Counter-clockwise rotate, 'W'=Wait, 'T'=Implicit wait (used only in plannerPaths).

## ***plannerPaths (List)***

List of n strings (n = number of robots) showing the planner's action sequence for each robot.

## ***plannerTimes (List)***

List of planner computation times (in seconds) for each planning episode.

## ***errors (List)***

List of errors. Each error is [robot1, robot2, timestep, description]. robot2 = -1 means single robot error.

## ***events (List)***

List of task events. Each is [timestep, id, description] where description is either 'assigned' or 'finished'.

***tasks (List)***

List of tasks, each represented as [id, source, target].