Abstrak

Title : Best Path Finding Using Particle Swarm Optimization for Optimizing Traffic Vehicles

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In driving, it is important to find the best path to go somewhere. The vehicle, year by year, will increase significantly. Drive efficiently become extremely important. Particle Swarm Optimization is one method to do the optimization in the search for the best. Particle Swarm Optimization is a method to perform optimization in the search for the best path. This method uses a random population and the search for optimal solutions by updating generations. The best solution (fitness) that has been achieved will be stored and updated in every generation.

This study is simulated in one of the best methods in search path by using the Blender as a provider of virtual environment for pensimulasian paths and path of a 3D object as a substitute for the real object. From the result, we got the Particle Swarm Optimization applied successfully to the multi-agent object in simulation. From the experimental results, also note that the number of particles increases in proportion with the complexity that is owned by road traffic. In the experiment, to solve problem with the road one block is required particle number four. After the addition of road blocks into three blocks needed increase in the number of particles as much as 21 to the search path can be done.