ABSTRACT

Bandung was recorded as one of the most congested city. One of the areas that often experience congestion is Bojongsoang. As a result of the traffic jam, drivers passing through the area will find alternatives routes to shorten their travel time. Ant Colony Optimization (ACO) and Firefly Algorithm (FA) are methods that can be used to search alternative routes. ACO and FA are included in the metaheuristic method, which means it can solve the problem with complex optimizations and will get the solution with the best results. The comparison of alternative route results between two algorithm will be seen from several parameters, namely vwhiclw mileage, vehicle travel time and average speed of the vehicle. Good alternative route can be seen from the time traveled. The smaller value of time travel on a track, than better the route is to become an alternative route. By using ACO and FA algorithm, it's expected to provide a good alternative route for vehicle users in Bojongsoang to avoid congestion.

Keyword: Congestion, Alternative Routes. Ant Colony Optimization (ACO), Firefly Algorithm (FA), Optimization