

ABSTRACT

Public transportation is a transport for passengers who do not travel by their private vehicles. One of the example of public transportation is Angkot. Angkot operates in the city to take passengers from place of origin to destination based on route that has been arranged before. The non-functioning of public transport with its main purpose which is carrying passengers with fast service, safe, and cheap caused congestion in the city of Bandung. The general public feels the impact of the current transportation problematics. Therefore the establishment of new routes for Angkot in the city of Bandung for Angkot are needs for an effective, productive, and certainly can reduce congestion due to Angkot. The purpose of this Final Project is to determine the new route of Angkot in the city of Bandung using the method of genetic algorithm. Genetic algorithm is very suitable for optimization problem. One of them are for route optimizer. In the genetic algorithm use several schemes and operators that are random population generator, reproduction process, selection process, crossover process, and mutation process. So in this final project will get new route of Angkot with the optimum computation time faster than other methods.

In this final project conducted research on the analysis of the implementation of genetic algorithm in the form of determinant of public transportation route in Bandung on route Abdul Muis - Cicaheum, Cicaheum - Abdul Muis, Abdul Muis - Dago, Dago - Abdul Muis, St.Hall - Dago, and Dago - St.Hall. The processing experiment uses 5 schemes ie a discovery scheme with 50, 200, 500, 1000 and 2000 generations. The final results show that each route processed using a genetic algorithm yields a better average occupancy rate than the original data.

Key Words: Angkot, Route, Genetic Algorithm, Occupancy