Abstract

The government of Surabaya is planning to develop urban transportation system in form of BRT, which also known as busway. The planning is a response to the traffic jam problems that grows as a results of unbalance growth between the road capacity and the traffic. To optimize this public the optimum route, in this case is one that gives optimum number of passengers served. In this research, we use Trip Generation and Trip Distribution to obtain the number of passengers served in each zone. Harmony Search Algorithm is then applied to get an optimal route. Based on this methodology, we obtained the objective function value of 94,385 for East to West route, and 44,911 for West to East route with required time of 5310.6 second and 1873.6 second respectively for each route.

Key Words: Route, Trip Generation, Trip Distribution, Harmony Search