

ABSTRACT

Companies that contribute in travel have many problems in the process of item delivery. Distances and priorities are considered for process of item delivery based on the highest priority. Delivery target that can be done one day evidently exceed the expected limit and that is the impact. This is an example of the waste time and operational costs that should be in the same time that two or more addresses can be sent.

Traveling Salesman Problem (TSP) was define a classical problem to looking the shortest route that salesman can be passed when visit several places without visit again in the same place more than once. In this study, TSP requires all calculations of possible routes to be obtained. Then choose one of the shortest routes by prioritizing the things considered, namely distance and priority. Delivery is done quickly through the shortest route according to priority using the Dijkstra algorithm.

Simulation showed that the Dijkstra algorithm must be modified using priority clustering and sub-routing Dijkstra's to solve Traveling Salesman Problems. The resulting route has an influence between two graphs. Complete graph has a distance efficiency of 47.8% and execution time of 48.1% compared to non-complete graphs.

Keywords: delivery, traveling salesman problem, dijkstra, distance, priority.