

Abstract

A freight company to deliver the goods were delivered, requiring path information that can accelerate the delivery process. The advantage is that companies can save the cost of fuel, deliver goods on time and earn the trust of consumers. To get a good path information is needed knowledge of Real-time Business Intelligence (Rt-BI). Concepts of Rt-BI could process information about road conditions, and produce the fastest path information are by using several techniques information processing such as Ant Colony Optimization (ACO). In this research, the method used is Ant System (one variant of the method ACO), which aims to process distance information intended to get the shortest path. The authors make modifications to the data TSP by adding the value of the Congestion Rate to describe the condition of density on the road. The greater the value of the average density is on the side of the pass, then the actual distance will become longer as well. In addition, the system created will update the value of the average density of each track will be visited when the courier was heading to the city that has not gone through. It is expected the search path will always find the quickest path according to the conditions in each lane density. The test results indicate that any changes in density values, the results always show the fastest path. In addition, methods of Ant System is affected by the value of the α and β in producing the best path.

Keyword : Freight Service, Real-time Business Intelligence, Ant Colony Optimization, Ant System, Congestion Rate, Fastest Path.

