ABSTRACTION

Distribution system owned by company have a great influence in company advantage achievement because unappropriate distribution system makes distribution expense increase. Such as those happened in packet delivery company of PT Berkat Setia Jaya Mandiri, existing distribution system is not compiled technically but only pursuant to amenity side company in determining it. Therefore in this final project, writer do more distribution scheme structure by considering various factor which can depress the level of distribution expense, such as: shortest distance and selection type of vehicle as distribution tools.

Generally, there are several things to perform within that trouble-shooting in five phases, that are identifying phase, initial research phase, design of distribution route phase, analyzing phase, and conclusion and suggestion phase. Identifying phase includes determining problems and goals which want to be reached. Initial research phase starts to do study literature and field study. Design of distribution route phase includes determining packet distribution route by Shortest Path method and Multicommodity Flow. The next phase is analyzing, doing comparison between existing system and propose system based on distribution expense and profit reached by each system. After analyzing process finished, conclusion and suggestion is the next phase.

Method of Shortest Path is used to look for shortest distance which can be passed by vehicle. Variable of distance has big influence for distribution expense because shortest distance will decrease vehicle operating expenses. While Multicommodity Flow Method is used caused by classification of packet type based on weight generating difference of determination of delivery tariff to each packet classification.

Conclusion obtained from this research is applying of proposal system distribution in PT Berkat Setia Jaya Mandiri will be able to decrease of operational cost to 29,26% in one day to the overall of packet delivery to 19 agent in Java island. Others, Customer service increase especially in the case of accuracy of packet delivery time and packet safety during transportation.

Keywords : Distribution System, Shortest Path, Multicommodity Flow.