

A Low Cost Transportation Plan to a Garment Factory

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Transportation is not only related to goods anymore but also for the passengers in the current society. So many workers in the apparel industry use public transportation services provided by their employer to save their money and time. Therefore, many researchers have studied about the transportation problems in various angles and used many techniques from different disciplines to identify optimal solutions for existing transportation problems in apparel industry. In this research, a case study was conducted using a garment factory where they provide transportation service to their employees. The main objective of this study was to identify a new transportation plan with low cost using some techniques in operational research. As the first step, secondary data was obtained from the selected garment factory and then Floyd's Algorithm was applied to find the shortest path to each destination from the factory. As the second step, a graph was drawn using the shortest paths which was founded and broken that graph into trees. Then Chinese Postman Algorithm was applied to each tree separately. Finally, transportation plan was obtained for each destinations and the results emphasized that the new plan was profitable than the existing plan.

Keywords: *Chinese Postman Algorithm, Floyd's Algorithm*

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