

A New SOM Batching Heuristic for Order Picking Systems

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Abstract

Base on the global economics crunch, the enterprise start to reduce the cost in many segments of supply chain in order to reduce the management cost. Therefore, this paper develops a new order batching heuristic (SOMB) for the order picking systems in distribution centers. It applies the idea of Self Organization Map to cluster the orders with higher relativity into a batch to reduce the total order picking distances. The number of SKUs in an order and the number of the same aisles covered for an order batch are the key decision factors. The increasing of SKUs in an order would affect optimum weights of SOMB; also, the weights should be more exactness to enhance the performance of order picking operations. A simulation experiment is executed to verify that the SOMB heuristic can reduce the order picking distances and increasing the utilization of picking vehicle.

Keyword : Order Batching, Self Organization Map