

An important part of warehouse operations is order picking, which is the process of collecting products from stocking locations. In our case, a scattered storage warehousing strategy is assumed. Items are stored at multiple locations scattered through the warehouse. Usually, multiple order pickers are responsible for a quick collection of items. That can result in order pickers blocking each other, reducing the picking throughput. Most of the existing picker routing algorithms are not concerned with picker blocking, even though its effect on picking efficiency can be substantial. It is the objective of this thesis to address the picker routing problem in a multi-agent environment. First, the literature is surveyed and then a multi-agent picker routing algorithm is presented. The algorithm is based on the idea of prioritized planning. Results of the empirical evaluation indicate that the multi-agent approach leads to better quality solutions.