OPTIMIZATION MODELS FOR COLLABORATIVE LOGISTICS

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Abstract: The Lane Covering Problem with Time Windows arises in the context of collaborative logistics. Given a set of lanes, it aims at finding a set of tours covering all lanes with the objective of minimizing the total travel cost. The purpose of this paper is to formulate a model for such a problem and to propose a heuristic approach based on Lagrangian relaxation for its solution. The behaviour of this procedure is tested on a set of random instances.

Keywords: lane covering; collaborative logistics; Lagrangian relaxation; transportation.