A lower bound for the adaptive two-echelon capacitated vehicle routing problem.

Summary: Adaptive two-echelon capacitated vehicle routing problem (A2E-CVRP) proposed in this paper is a variant of the classical 2E-CVRP. Comparing to 2E-CVRP, A2E-CVRP has multiple depots and allows the vehicles to serve customers directly from the depots. Hence, it has more efficient solution and adapt to real-world environment. This paper gives a mathematical formulation for A2E-CVRP and derives a lower bound for it. The lower bound is used for deriving an upper bound subsequently, which is also an approximate solution of A2E-CVRP. Computational results on benchmark instances show that the A2E-CVRP outperforms the classical 2E-CVRP in the costs of routes.

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CPLEX; VRP

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References:


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