

عنوان مقاله:

Designing Incomplete Hub Location-routing Network in Urban Transportation Problem

محل انتشار:

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نویسندگان:

m setak - Department of Industrial Engineering, K.N.Toosi University of Technology, Tehran, Iran

h karimi - Department of Industrial Engineering, K.N.Toosi University of Technology, Tehran, Iran

s ratani - Department of Industrial Engineering, K.N.Toosi University of Technology, Tehran, Iran

خلاصه مقاله:

In this paper, a comprehensive model for hub location-routing problem is proposed which no network structure other than connectivity is imposed on the backbone (i.e. Network between hub nodes) and tributary networks (i.e. Networks which connect non-hub nodes to hub nodes). This model is applied in public transportation, telecommunication and banking networks. In this model locating and routing is considered simultaneously and it has a multiple allocation strategy to allocate non-hub nodes to hub nodes. In addition, non-hub nodes can connect directly to each other. The objective of the proposed model is minimizing costs of establishing a network and transferring flows. To expedite solving the proposed model and improve the lower bound, which gain from linear relaxation, a number of preprocessing tests and valid inequalities are presented which have relatively good performance in the proposed model. Their performance is analyzed by implementing them on the test problems. Results show that using all preprocessing tests and valid inequalities is the best approach to solve the problem among all proposed approaches in this paper

کلمات کلیدی:

Hub Location, Multiple Allocation, Valid Inequalities, Transportation Network, Routing

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