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ОПТИМАЛЬНЕ УПРАВЛІННЯ ПЕРЕВЕЗЕННЯМИ

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OPTIMAL TRAFFIC MANAGEMENT

From the logistics point of view, transportation of cargos represents difficult process which includes stages of planning, organization and execution of goods delivery. The study of opportunities of organization improving of transport process, certainly, remains the actual problem. Its successful decision can be reached only by complex reviewing of all stages and components of transport process with involvement of the additional contingent of scientists and researchers.

For the classical transport task select three types of tasks:

1. criterion of cost (achievement of a minimum of costs on transportation) or distances;
2. criterion of time (the minimum of time for transportation is spent)
3. criterion of way length .

We modify the classical transport task in order that it satisfied to needs of the population of the modern city. There will be a task of finding of the optimum plan of person transportation from point *A* to point *B*. At the same time we will consider criterion of time, that is speed of the transportation, a way and cost of the transportation.

Conditions of the task decision we will consider presence of one or several offered routes between points *A* and *B* which are optimum on all the criterions (with same weights). The purpose of operation is creation of the mechanism of creation and search of such optimum routes for the decision transport task in the conditions of the modern city. The mechanism will use the existing geographic information systems, and will be created on the basis of the modern Internet technologies.

Use of the existing Internet services providing satellite images of the city of high detailing and also other cartographical services is offered. The geographic information system will allow to make routes in an automatic mode (with use of the district map which is built in the program with transport communications) and to define time of passing of routes [1].

Application of a dynamic programming method is offered [2]. This method is intended for the solution of a wide range of tasks which can be divided on adding each other subtasks, and the optimal solution of these subtasks can be used for the decision of the initial task. At first it is carried out solutions of subtasks, and further based on the received decisions the solution of the initial task is found.

Authors offered modification of dynamic programming method, that simplifies search of an optimal solution by means of correction of status functions. And adaptation of an algorithm for accounting of all three optimality criterions is made.

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