AN ALGORITHM FOR THE TRANSPORT OPTIMIZATION IN A COLLABORATION LOGISTIC NETWORK

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Abstract: In this paper is presented the aspects related to the PN II 71-075/2007 grant. In side of SIRLC Project is proposed conceiving and realizing of an informational system for a cooperative logistic network which is worshiped for SMEs located among the Romanian driveway of E60 European Highway. This paper presents an algorithm for the transport optimization in a collaboration logistic network.

The running of a collaboration logistic network involves the optimization of the goods transport by a tide collaboration between the economic agents who desire to deliver their products and the transport companies which delivers these services.

The transport optimization is based, in essence, on two essential statements:

1. Minimizing road course;
2. Maximizing cargo vehicle;

The two mentioned statements should lead, by implementing them in a informational system, to the transport const minimization but because the huge number of parameters it imposes a more careful analysis. For example, not always the shorter road imposes minimum costs, because the road quality can influence the costs (a low speed on roads of bad quality can increase the costs, even if the length of the course is shorter that that on the good quality roads) and adjusting the cargo can grow the costs by cumulating of longer distances (loading a cargo from different deliverers assumes more roads to be made and a longer way to go). The presented examples show the fact that the two statements are correlated and not independent.

The analysis of some practical information's shows that the problems of the transportation in the conditions of a collaborative system imposes a series of coercions, made by synthesizing real situations, met in practice.

- *Adjustment the vehicle with the transportation cargo (ADE).*
- *Goods compatibility belonging to different cargos transported with the same mean of transportation (COMP).*
- *Imposing the loading and unloading periods (PLAN).*
- *Constraining about the loading capacity of the mean of transportation (GVOL).*
- *Imposed sequence of the loading and unloading in case of multiple loadings (ORD).*
- *Affiliation of the mean of transportation to the load corresponding cluster (CLUST).*

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