

*the load transport, the size of code, the carrier,  
the sender, the recipient, road transport,  
information flows, transport system*

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## **THE EVALUATION OF THE SIZE OF CODE OF LOAD TRANSPORTATIONS IN INFORMATION FLOWS THE DIGITAL IDENTIFICATION (ID)**

Road transport in Lithuania retains its prevalent position as for as both internal and international transportations are concerned. There are being developed public information and transport mobile solutions for Lithuania when transporting loads by road transport means. To serve the purpose there the main information codes have elaborated for the Lithuanian road goods transport, which are presented in this article.

The statistical informative data which is expedient to be processed with reference to sender, carrier and recipient is also provident in the article.

## **OCENA WIELKOŚCI KODU W TRANSPORCIE ŁADUNKU W PRZEPLYWACH INFORMACJI IDENTYFIKACJI CYFROWEJ (ID)**

Transport drogowy na Litwie zachowuje swoją przeważającą pozycję zarówno w zakresie transportu zewnętrznego, jak i wewnętrznego. Przy transportowaniu ładunków za pomocą transportu drogowego na Litwie opracowywane są systemy informacji publicznej i ruchome rozwiązania transportowe. Aby służyć temu celowi zostały opracowane główne kody informacyjne dla litewskiego drogowego transportu towarów, które przedstawia niniejszy artykuł.

Artykuł przedstawia również statystyczne dane informacyjne, które należy przetworzyć, w odniesieniu do nadawcy, przewoźnika i odbiorcy.

### **1. INTRODUCTION**

The contribution of road business into Lithuania's economy and the state's budget is not little and it grows as each year goes by. Road transport in Lithuania retains its domineering position as much as both internal and international transportation are concerned.

Road transport business people from Lithuania have been working in Europe for a long time. They have been operating in accordance with European established standards, therefore

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this market is well known to them. The services provided by Lithuanian road carriers are used by European countries enterprises. That has been influenced by Lithuania's favourable geographic position, a sufficiently expanded road infrastructure as well as high professional qualifications. Road transport is a branch of economy which nowadays can success fully compete with other European carriers.

Transport sector performs an important role the national economy. Its contribution to SNP structure amounted to 6.7% in 1999 whereas the number of employees into it was 4.4% of the overall working population. Due to the correlation between these two indicators (Lithuania surpasses European countries which have old road transportation traditions such as France, Italy, Sweden). Lithuania is not inferior to Belgium, Denmark, Finland as other countries in this respect either.

In recent years in Lithuania there have been observed two marks structure formation trends: firstly, a number of small business has been going up considerably, i.e. fledgling companies have been relatively small: secondly, the number of transportation enterprises as well as transport means have increased, thus transport market according to its structure is approaching the western one; there are being created conditions conducive to the optimal of the human, time and transport means resources.

The introduction of licensing and its later strict enforcement made the introduction of licensing and its later strict enforcement made carriers pay more attention to the quality of their services in such a way it ensured that cars going to Western Europe were prepared to compete with the enterprises operating in that particular region. Such a policy should come op to our expectations since more states then could increase the number of permissions for Lithuanian states then could increase the number of permissions for Lithuanian carriers provided they use environmentally – friendly and safe trucks. Road transport has the greatest impact on the overall growth of transportations volume.

Road transport carries the majority of goods up to now no transport kind has been able to guarantee such a speed, punctuality and reliable delivery from “door to door” as road transport means can. the efficiency of this transport system is constantly due to good infrastructure, the use of transport means with bigger capacity, better communication as well as flexibility and driver-oriented tendency. Although recently more and more attention has been paid to multimodal transportation, road transport is not going to yield its established positions. A majority of international experts envisage a rapid growth of trade volume in all European countries, especially in the Baltic Sea region. There has been foreseen a rapid growth of loads flows by road transport means.

## 2. THE ESTABLISHMENT OF THE DIGITAL (IDENTIFICATION ID) CODE OF LOAD TRANSPORTATION

The author collaborating with a scientists' team from Vilnius Gediminas Technical University and Kaunas Technical University is prepared a project called "Public information and transport mobile solution's". The purpose of this work is to develop public information and transport mobile solutions when carrying goods by road transport mean.

While carrying out this work, it is necessary to establish the digital code in informative flows. On European scale these information flows have been defined by Committee regulation (EB) Nr 2163/2001 "The order of conveying statistical data concerning load transportation by road transport means". This regulation was enacted on 4 November 2001 [1]. An accordance with this act there has been defined the format of conveying technical data to Committee as well as exchange standards. This regulation is applicable to all EA member-states.

In accordance with this regulation the member-states send to the Committee (Euro state) three sets of data, with include variables defining a transport means, the variables defining a trip and loads.

With reference to this regulation there been elaborated the main information codes for the Lithuanian road load transportations. In the basis of the main document regulating load transportations, i.e. CMR convention, information flows function among three main member of transportations, i.e. the sender, the recipient and the carrier.

The information streams under development among the sender, the carrier and the recipient are presented in Fig. 1.

After transportation process has taken place, various information/data flows have to be processed and various data is derived. The latter should be quirefed witch reference to the Sender, the Carrier and the Recipient.

Them the carrier's point view it is expedient to process and derive data for each trip separately as well as for each period of accounting. It is expedient to derive statistical informative data for each trip from the Carrier's point of view as follows:

1. The load volume that has been transported,  $t$ ;
2. The work performed,  $t \cdot km$  (i.e. the weight of the load transported in tons multiplied by the distance covered in km);
3. Factual date of the load delivery as well as the factual time of the load delivery,  $h$ , min.;
4. Each stoppage time "from-till",  $h$ , min.;
5. The period of each stop during the trip,  $h$ , min.;
6. The overall time of stops during the trip,  $h$ ;
7. The time of each travel "from-to",  $h$ , min.;
8. The time period of each travel,  $h$ , min.;
9. The overall time period of travel,  $h$ ;

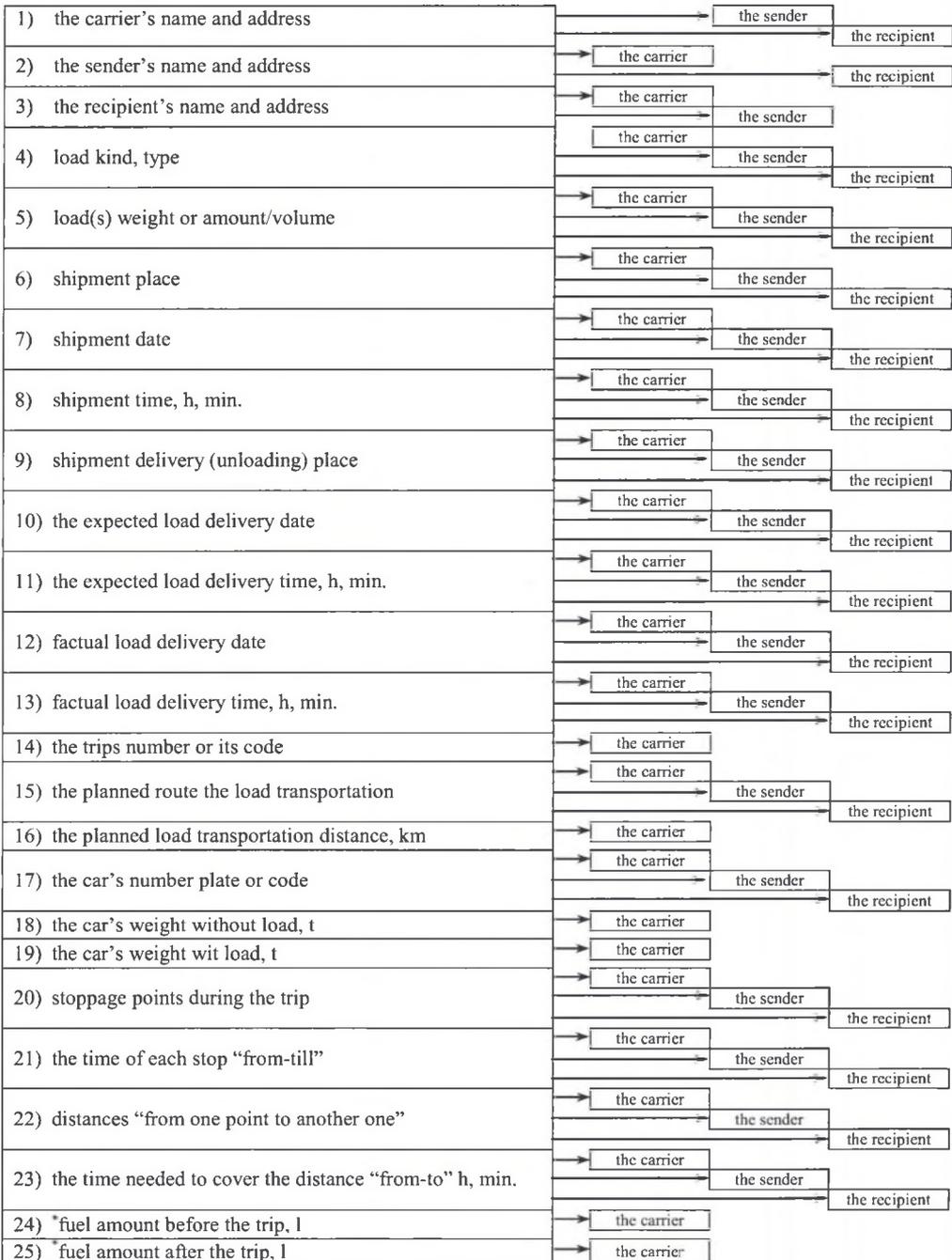


Fig. 1. The planned information flows among the sender, the carrier and the recipient

\* Note – having installed a fuel cell into a car.

10. The average travel speed km/h (i.e. the trip distance divided by the trip's time period, h);
11. The load delivery speed km/h (i.e. the load transportation distance, km divided by the overall sum of the periods of travelling and stops, h);
12. The amount during the trip, l;
13. The average fuel consumption, litres-100 km;
14. The trips itinerary on the map, i.e. the planned route and the actual route of the load transportation on the map. It is expedient to include into the statistical calculations points 4, 5, 6, 7, 8, and 9 from the above-mentioned ones.

In such a way the true statistical calculations for each trip is provided.

It is also expedient to process and derive the following statistical informative data from the Carrier's point of view for each period of accounting: a month, a term, half a year, a year.

It is expedient to provide the Lithuanian Road Service Committee with the processed statistical data derived from all the information obtained. This should include the summative amount of loads when depicting the overall scheme of routes. Besides there should be included the cartogram of loads flows in tons on the country's road map (on analogy, there should be presented accounting periods from the carrier's point view).

### 3. CONCLUSIONS

1. Road transport input into Lithuania's economy is not little and is increasing as each year goes by. Road transport retains the predominant position as for as both internal and international transportation are concerned.

2. Public information and transport mobile solutions for Lithuania are being developed in order to carry loads by road transport means.

3. The order of conveying statistical data about loads transportation by road transport means is established by the Committee's (EB) Nr 2163/2001.

4. In accordance with CMR convention information flows operative among three main transportation members – the Sender, the Carrier and the Recipient.

5. There have been elaborated the main information codes for the Lithuanian load transportations by road.

6. After the transportation process has taken place, various information flows must be processed and various statistical informative data is derived.

7. There has been established what kind of statistical informative data is expedient to process from the sender, carrier and recipient point of view.