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Electronic Logistics Services in Russia:  
the bridge to United Europe

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# **Electronic Logistics Services in Russia: the Bridge to United Europe**

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## 1 Introduction

The international practice demonstrates that the most part of border-crossing procedures can be facilitated. In 1997, the Commission on International Trade and Investment Policy (International Chamber of Commerce) has developed the International Custom Guidelines for replacement procedures of physical customs control by pre-entry and post-audit documentary control. Currently, trading and customs operations need electronic documents. Applying of electronic instruments allows to accelerate, facilitate international trade and to reduce costs of cargoes registration in port's check points.

Electronic Logistics Services proceed from a principle of "Single Window" in accordance of which the required information is put once into an appropriate data base. This way the information became available for the concerned participants of the system. The most highly integrated systems have originated from the port administrations. The European port industry is a dynamic one. Practice of electronic services in EU ports is highly developed.

The current ports issues are multiple and complex. The global market space, with powerful and relatively independent players, extensive business networks and complex logistics systems creates a high degree of uncertainty in the European port industry. The main question faced European port Authorities now is how to respond effectively to market dynamics. The focus of port competition is gradually changing.

Russia became a participant of European Electronic Logistic System slightly more 10 years ago. Since 1994, the international cooperation on Electronic Logistics Service development in Northern Europe<sup>3</sup> is carried out within the frames of TEDIM program. One of the Russian major projects in this sphere is "Kaliningrad transit". It provides, in particular, introduction of Electronic Logistics Service on railway check points.

Introduction of Electronic Logistics Service in Russia requires the complex solution, which includes the technical standard development of electronic documents, the appointment of the Ministries and the Departments to be involved in the system of Electronic Logistics, the compatibility of Russian and international models of Electronic Logistics, the financing actions for introduction of Electronic Logistics model in Russia, the adaptation of legal base on Electronic Logistics.

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<sup>3</sup> Baltic Sea Region including Russian Federation.

The paper investigates the main directions of Electronic Logistics development in Russia. It not only identifies key market tendencies in trade and logistics, but also analyses how the economic and logistics trends affect European ports.

## 2 Facilitating international trade

### 2.1 *The need for new technologies in logistics*

The need of facilitating the organization of the international goods flows on the basis of electronic information systems has arisen over twenty years ago. During the period large-scale investments the perfection of communications, first of all, in the large handling centers, especially ports, have been carried out. But new information systems are originally developed separately in each sector (each mode) of transport services (motorway/railway/maritime/inland water transportation). Specific modal systems were created in each sector by means of its own software. The port administrations had the most highly integrated systems unifying technology of information interchange, including the boundary, customs and logistics control. As it is known, port's logistic centers are the most developed organizations in this field.

New logistic technologies allow improve the process of cargo delivering. Increasing customer demands push the 3PL service industry (Third Party Logistics) forward. At the same, the time market to innovative forms of non-asset based logistics service provision, i.e. 4PL (Fourth Party Logistics), is opened. The rise of 4PLs changed a whole range of business models, often poorly. Customers seem to be the main obstacle. Nevertheless, non-asset based 4PLs were emerged. They will not take over the role of major player in the European logistics market from the asset-based 3PLs. Asset-based full service providers<sup>4</sup> install the IT control systems themselves. Moreover, many European logistics users prefer to keep control on the design of the supply chain instead of being totally dependent on 4PLs<sup>5</sup>.

Finally, joint using of logistics and electronic data exchange technologies have led to occurrence of the electronic logistics services and its suppliers in the form of the centers and agencies of electronic logistics. Its can be organizations of various patterns of ownership.

The international practice demonstrates that the most part of border procedures<sup>6</sup> can be facilitated. In 1997, the Commission on International Trade and Investment Policy (International Chamber of Commerce) has developed special International Custom

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4 For example, the express integrators DHL and FedEx

5 [www.espo.be/downloads/archive/dac5f5da-3b43-4cce-a661-9d1c4c2369a4.pdf](http://www.espo.be/downloads/archive/dac5f5da-3b43-4cce-a661-9d1c4c2369a4.pdf)

6 ICC International Customs Guidelines. Commission on International Trade and Investment Policy, 10 July 1997 // <http://win.mail.ru/cgi-bin/readmsg/customdoc.htm?id=110137916000024874;0;2&mode=attach>

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Guidelines to increase an efficiency of moving goods through frontiers. The document focuses on replacement procedures of physical customs control by pre-entry and post-audit documentary control. At the same time, persons and entities filling the customs declaration have got an option between the electronic or the paper form of documents, and also a place of the customs clearance.

In 2005, the World Customs Organization has developed a number of the standards directed on facilitation of customs procedures and a trade security between the countries especially under the circumstances the international terrorism threats. These standards considering the global processes development assume the creation of necessary conditions for more effective interaction between the Customs Services of different countries.

Such approach is fixed in the new Customs Code of the Russian Federation (2004) and in the project "Concepts of Russian Customs Service development for 2010". It extends on a risks management system (RMS), a practice of modern information technologies adoption, preliminary informing of Customs Bodies on moved goods, etc<sup>7</sup>.

The modern risks management system promotes transition to paperless technologies in customs sphere. In EU countries introduction of risk management system required from 8 till 15 years. But now high efficiency of this system is come out. So, in Sweden nearby 2 000 employees of customs administration put in order 5,5 million documents. At the same time, 68 000 customs officials make out 2,5 million documents in Russia<sup>8</sup>. Therefore, transition to electronic documents becomes the urgent requirement of modern trading and customs operations development.

Large flows of maritime cargoes contribute to the development of the world trade and economy. Ports play the indispensable role in world commerce. International Association of Ports and Harbours (IAPH) encourages ports to apply IT technologies to facilitate cross-border procedures.

IAPH continues to work together with international organizations concerned with the simplification and harmonization of international trade procedures, such as WCO

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<sup>7</sup> Customs Bodies of the Russian Federation have started its creation in 2000. The first stage of transformation has ended in 2003 by the acceptance of "Concepts of a control system of risks in Customs Bodies of Russia". The second stage has begun in 2004. It is connected with introduction of RMS. Development of various technologies allows to carry out processing of documents in a regular basis has ended to the beginning 2006. Risk management system will start its function in full after 2008.

<sup>8</sup> Alexeyev A. Look in tomorrow (Алексеев А. Заглядывая в будущее)// Таможенные новости. 2005.№11. с.15.

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(World Customs Organization) in the context of improving Customs procedures and UN/CEFACT (United Nations Center for Trade Facilitation and Electronic Business) in the sphere of promoting Information Technology (IT) in port's documents turnover.

## **2.2 *Electronic Logistics Services as a tool of facilitating international trade***

Inculcating conception of electronic document circulation provides special organization of electronic documents transfer and storage. It has named by Electronic Logistics Service similarly to logistical activity on the organization of the goods traffics and storage processes.

Electronic Logistics Service (electronic logistics services) is the kind of activity connected with accumulation, processing, an exchange and storage of electronic documents on international commercial transactions and transportations. Using electronic logistics services allows to accelerate, to simplify and to reduce the cost of vehicles and cargoes registration process in check points. Electronic logistical data has to be uniform and obligatory for all participants of international trade processes, including customs bodies. "Logistical data" are the documents connected with registration of the international transaction, vehicles and freight forwarding, and also the electronic logistical passport. These data can be transformed to electronic messages of the automatized information system covering the state control bodies.

Practice of electronic services in EU is highly developed. Its enlargement is constantly supported by UN/CEFRACT. The system of electronic document circulation in sphere of the international business is based on the standard of an electronic exchange of documents EDI (Electronic Data Interchange). At the moment, the EDI system is formed. EDI systems are used to apply two standards - UN/EDIFACT<sup>9</sup> and ANSI X.12<sup>10</sup>.

We need to take into account some features of the logistics process. Under conditions of paper documents circulation logistics forms a part of functions performed by the forwarder (goods delivery management operator) or his agents, which should be present at points of vehicle and cargo registration (checkpoints, multimodal transport

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<sup>9</sup> EDIFACT (Electronic Data Interchange for Administration, Commerce and Transport) is one of the most widespread standard. It defines the order and procedure of formalized documents for their using in electronic document circulation: in management, commerce, on transport. Using EDIFACT standard was adapted by Economic and Social Council of UN (Recommendation N25) in 1996. This standard has been accepted by the International Standard Organization as ISO 9735.

<sup>10</sup> US standard



nodal points and etc.). Partly these functions are performed by carrier, e.g. during Carnet-TIR transportation procedure.

In the intermediate stage of turning circulation of documents to electronic format when electronic messages are already being used, but paper documents are still in force, forwarder's agents (people) can be replaced by "electronic agents" (e-mail address, APM screen). However, there is a problem of informational compatibility. Under full (100%) use of electronic documentation compatibility problem will be overcome. The services of mentioned above "electronic agents" of goods delivery management operators form the essence of electronic logistic services.

These functions cannot be performed by providers of telematic services of corporate or public use, because for them the body of a message (which contains electronic logistic data allowing for simplification and quickening the process of vehicle and cargo registration) is transparent. Comparative analysis of traditional and electronic fulfillment is given in Table 1.

**Table 1** Traditional fulfillment versus e-fulfillment

	<b>Traditional fulfillment</b>	<b>E-fulfillment</b>
<b>Orders</b>	Predictable, large	Variable, small
<b>Order cycle time</b>	Weekly	Daily, hourly
<b>Customer</b>	Strategic	Unknown
<b>Customer service</b>	Reactive, rigid	Responsive, flexible
<b>Replenishment</b>	Scheduled	Real-time
<b>Distribution model</b>	Supply-driven (push)	Demand-driven (pull)
<b>Demand</b>	Stable, consistent	Seasonal, fragmented
<b>Shipment type</b>	Containers, pallets	Small package, express
<b>Destinations</b>	Concentrated	Dispersed
<b>Warehouse models</b>	Storage, order-picking	Transformation, consolidation
<b>Transportation model</b>	Dedicated, load driven	Shared services, netw. Driven
<b>Client value</b>	1) Cost, 2) speed, 3) quality	1) Quality, 2) Reliability

Source: Factual Report on the European Port Sector 2004-2005. European Sea Port Organization. Brussels. P. 19, [www.espo.be/downloads/archive/dac5f5da-3b43-4cce-a661-9d1c4c2369a4.pdf](http://www.espo.be/downloads/archive/dac5f5da-3b43-4cce-a661-9d1c4c2369a4.pdf)

### **2.3 "Single Window" principle**

Electronic logistics services proceed on the principle of "Single Window". It means that all necessary information can be entered into the information system only once. It immediately gets to all interested participants of the system, first of all to the border

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control bodies. The system of "Single Window" unites in the uniform information data system of all control bodies and other participants of transportation (declarants, transport companies, logistical operators, etc.). Accordingly, the reliability of the information raises and time for its transfer and processing is decreased. Besides, application of such system increases a transparency of activity of the companies participating in the external economic operations. It allows improve collecting of taxes and duties and lower risks under the customs clearance procedures.

Realization of the "Single window" concept is closely connected with the problems resolved in the frame of International Conventions and Agreements in the transport sphere.

The base on "Single window" concept was put more than 10 years ago. For instance, the Swedish system of "Single Window", known as "The Virtual Customs Office", consolidates Customs service of Sweden, the Swedish Council on an Agriculture, National Council on Trade, National Inspection on Strategic Products and Police. The system is included in communication networks of transportations participants and can automatically update changes of interest rates, rates of tariffs and tax rates. It covers all kinds of trading regulation, provides users with the automatic notice on changes through the Internet (or SMS messages), allows create personal virtual customs offices. Import and export declarations can be transferred both over the Internet, and by means of EDIFACT system. All electronic services are presented at Internet sites of virtual customs offices. There are more than 150 virtual customs offices with the information in 10 different languages.

"Single window" system in the Netherlands (at Schiphol airport) promoted creation of "cargo clearance point". In Felixtow port (the Great Britain) the system of electronic logistical service has allowed to reduce time of a container customs clearance from 6 days till 6 hours. Application of the system in Singapore has led to receiving 1 billion dollars of additional incomes as a result of gathering "hopeless" taxes and payments. However experts note the Felixtow port's success lies in the geographical advantages of this harbour neither electronic logistics service implementation.

Successful development and operation of a port requires a carefully-prepared port planning and design. IAPH compiled best practices and experiences gained by its' members into the "Guidelines for Port Planning and Design" that is now in its 2nd edition (2001), which remains one of the basic guides to the world port community. Modern IT systems have become an important asset for the survival of Ports Authorities.

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Ports and their situations differ from one port to another and one country to another. The diversification strategy of the transport logistic firms in European ports, especially their vertical integration policy, is competing within supply chains. European seaports have to deal with large port clients who possess a strong bargaining power in respect of terminal and inland transport operators. The power of the large intermodal operators, strengthened by strategic alliances between them, is used to reinforce the competition between ports or group of ports. The loyalty of a port client cannot be guaranteed. In this environment, the success of a port is determined by the opportunity of the port's Administration to use synergy effect with other transport nodes and other logistics networks actors which they are part of.

Collecting and sharing best practices and experiences are of importance to resolve the problem. It's necessary to archive common port certification standard.

On 16 March, 2007 the Port of Dunkerque Authority (PDA) officially entered ISO 9001 Version 2000 certification<sup>11</sup> process for the reception of shipping. This process was started in the late 1990s to structure its quality goal. The department dedicated to internal communications within the various port services was created. In the continuation of this strategy, the next goal aimed at by the Port's management is the certification of its ship reception procedures in the first half of 2008. This certification, by harmonizing the work methods, will allow an improved coordination between the Port's internal services – the Harbour Master's Office<sup>12</sup>, the lock operators, warpmen, port structures maintenance personnel, maritime accesses, human resources – as well as with the Port's external services<sup>13</sup>. It will guarantee standards of safety, performance as well as an undertaking to maintain a high quality for port's services to ships, their owners and customers.

Significant modifications have taken place in international trading flows. We can observe structural changes in the hinterland service areas. It is expected that the hinterland reach of European ports for bulk commodities such as oil and iron ore is not going to shift dramatically in the years to come. More changes are expected to take place in the routing of container flows. A large part of the throughput of European ports remains locally generated. Nonetheless, most European container ports are witnessing a dramatic increase in the relative importance of long-distance transit flows and transshipment traffic in total port traffic. The growing role of intermediacy contributes to

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<sup>11</sup> [http://www.portdedunkerque.fr/jahia/Jahia/lang/en\\_GB/pid/19](http://www.portdedunkerque.fr/jahia/Jahia/lang/en_GB/pid/19)

<sup>12</sup> dock masters, maritime traffic control, hazmats, coordination office

<sup>13</sup> pilotage, towage, berthing crews, etc.

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shrinking captive hinterlands. Instead, inter-port competition has intensified, even among more distant seaports. The modal shift results in most European ports look promising, though they still remain below the theoretical capabilities of inland navigation and in particular of rail. Given the development in European distribution structures, it is likely that road haulage will remain a dominant mode, notwithstanding the increasing importance of rail and barge in particular on the high-volume trunk lines.

New liner service networks and larger ships force previously non-competing ports into head-on-head competition. Seaports located far away from each other are now to some extent competing. The position of the large ports is to some extent threatened by medium-sized ports and new hub terminals. New terminal facilities might give shipping lines and alliances more opportunities to use their bargaining power. On the maritime side, the concentration of ports of call led to the development of maritime haul services for ports. The Baltic and Atlantic ports have been linked for some time now to the major European ports by sea routes. In some cases, feeders are facing competition from inland modes. There are inland and maritime transport alternatives from/to the northern range ports, particularly between Germany, Italy, Spain and the main English ports. Many small ports have proven to be rather successful in following a niche market strategy. They have understood that a dedicated supply chain approach to specific commodity flows can bind cargo to a port.

Corridors and axes development improve the location of logistics centers in seaports and inland hubs and along routes between sea- and inland ports. The interaction between seaports and inland locations leads to the development of a large logistics pool consisting of several logistics zones. Seaports are the central nodes driving the dynamics in such a large logistics pool. But at the same time seaports rely on inland ports to increase their attractiveness. The creation of large logistics poles leads to new relations between seaports and inland hubs. Informal programs of co-ordination between port authorities and inland hub administrations are developing. Ports are not involved in a direct cooperation yet, where profits and risks are shared.

### **3 Russian–European Co-operation in the sphere of Electronic Logistics**

The EU remains the most important trading partner of the Russian Federation. However, the significant trade misbalance exists between the trading partners. Economic development in Russia and new EU countries is expected to grow in the future. The enlargement of the EU might imply a move of global plants to the European Union and a move from manufacturing activities from Western Europe towards the low-cost regions in Eastern Europe. This tendency will generate larger bi-directional East-West flow within the European Union of raw materials and consumer products. Rail and feeder shipping are expected to play a key role in accommodating these flows. Northern ports, in particular Hamburg and Baltic Sea ports, are likely to benefit the most from EU enlargement, whereas new development opportunities might arise for secondary port systems in the Adriatic and the Baltic Sea.

European rail logistics are highly complex. In recent years following rail liberalisation, initiatives have emerged that should lead to real pan-European rail services on a one-stop shop basis. Hub-based networks have complemented the existing blend of direct shuttles, inter-port shuttles and block trains. Smaller container ports tend to seek connection to the extensive hinterland networks of the large ports by installing shuttle services either to rail platforms in the big container ports or to rail hubs in the hinterland. Logistics zones in the hinterland are increasingly competing with seaports for what the location of European distribution facilities and VAL are concerned. Shortage of industrial premises, high land prices, congestion problems, the inland location of the European markets and severe environmental restrictions are some of the well-known arguments for companies not to locate in a seaport.

A number of land-based and maritime transport corridors will become more important in the future (e.g. the Eurasian land-bridge system, north-south corridors in Europe, “Kaliningrad transit”). The development of European axes and sea motorways is enhanced by the EU’s policy as regards the creation of TEN-T and initiatives of rail operators, mega carriers and other market players to extend their European transport networks.

#### **3.1 *TEDIM as a Baltic “Single window” project***

In 1995, Russia, Finland and Germany signed Memorandum of mutual understanding about starting the program of development telematics in delivery and logistics

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management in International trade in the basin of the Baltic Sea and neighbor regions (TEDIM - “Telematics in Foreign Trade Logistics and Delivery Management Programme to improve logistics system in the Baltic seaboard and adjacent areas”). 07.06.1996, in Helsinki, State Custom Committee of Russia and State Custom Department of Finland signed the Protocol on cooperation in the frame of TEDIM project. According to the Protocol the information at the checkpoint is presented to custom bodies at the floppy disk with accompanying documents.

At present Lithuania, Latvia, Estonia and Poland are also taking part in the development of TEDIM program projects. Coordinating work between the meetings of international coordinating committee is done by the secretariat of the TEDIM program based on the ministry of transport and communications of Finland.

Depending on the modern scheme of organization of information exchange, there are different levels of forming of legal documents. If electronic documents are moved directly from custom body of one state to the custom body of another state, it is enough to use international Protocol. When realizing this Protocol, it is necessary to meet international norms of contracting, and also Russian legislation, regarding the language used in the Protocol, rights and duties of parts, places of solving the conflicts.

The practice of using EDI systems shows that participants of the international trade used to send electronic documents directly to control services, In this case, it is not enough to use only international Protocol between custom bodies. International electronic exchange is taking place between exporters of goods, that is why it is needed to make a contract with each member of electronic exchange. The subject of the contract can be information service, e.g. foreign exporter sends a customs declaration in the form of electronic document, customs bodies check the message and give the permit for moving cargo, this way provide information service and make preliminary decision.

During the existence of TEDIM program, more than 20 projects have been accomplished, about 30 projects are in the development stage, among them Euro-Russia, EuroKaliningrad, InfoLogService.

At the time of realization of TEDIM program projects telematics and logistics facilities are being mutually used, which gives birth to a new kind of activity in the management of goods delivery – electronic logistic service. Some the pilot projects using the electronic declaration also exists as a part of electronic logistical system: the Baltic customs in Big Port of Saint Petersburg; Kashirski Customs check point; Customs

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check points in Central, Southern, Volga and Northwest districts (sum total more than 50 customs check points).

During the realization of the TEDIM projects listed above on the territory of Russia the question of status of electronic logistic services plays a key role. With implementation of new electronic logistic technologies in Russia during the period of transition to market economy it is necessary to provide for effective demand for electronic logistic information. A necessary condition for that is economic benefit from using such information. Economic benefit can be obtained by changing administrative procedures of the following state bodies: Ministry of transport, Ministry of economic development and trade, State Customs Service, Ministry of agriculture (veterinarian and phyto-sanitation inspections) and other bodies (See Table 3).

### **3.2 Experience of Electronic Logistics Services in Kaliningrad region**

Processes of economic integration in Western and Central Europe, which gave birth to “Kaliningrad transit” problem and are also taking place in CIS countries (formation of single economic space of Russia, Ukraine, Kazakhstan and Belarus), raised the problem of economic support of “internal” goods transportation, contrasted with traditional “foreign trade” goods flows.

“Internal” cargo can cross borders of the states making up an economic or political union, but is transferred mainly by means of motor transport within single economic space without border, customs and other types of supervision. “Internal” cargo status allows transportation to be simplified, quickened and made cheaper, which is one of the economic stimuli for integration.

EU, European organizations, such as Baltic Ports Organization (BPO)<sup>14</sup>, ESPO and others considers Russia both as a huge market and as a transit Eurasian territory. Christel Wiman, the Chairman of BPO, inclines to believe Port of Kaliningrad as a small one in the region. But its’ development depends on EU’s economic achievement. From BPO point of view Baltiysk is more perspective harbour in Kaliningrad region. Some members are afraid of this port development. The main problem of the further commercial development is its military subordination. Christel Wiman emphasises the

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<sup>14</sup> <http://www.bpoports.com>

necessity of new technologies application to minimize the lay time, “door-to-door” container delivering etc<sup>15</sup>.

System of “Kaliningrad transit” is intended for improving conditions for land transfer Russian goods and carriers between Kaliningrad exclave and internal Russian territory via Lithuania. It means connecting Federal Customs Service of RF to Lithuanian segment of the new computer system of transit traffics EU (NCTS)<sup>16</sup>. It’s rather than land transport not sea ports project. We think “Kaliningrad transit” is mainly our national problem.

There are several types of control on the process of crossing the border by goods or transport vehicles, and all of them are conducted by different Government structures. Due to non-harmonized activity of those structures, delays in moving goods and cargoes through the border take place.

**Table 2** Description of border control in the Russian Federation

Kind of the control	Documentary	Visual
Boundary	The passport for traveling abroad, the passport of the seaman	Conformity of the person
Customs	In conformity with clauses 73-76 of the Customs code	Survey of cargoes and vehicles
Transport	Travelling sheet, invoice, bill of lading, Carnet TIR (if it is available)	Vehicles and vehicles documents
Veterinary	Veterinary certificate on production of the animal origin (it is given by State Veterinary Service)	Animals and the goods of an animal origin, forage for animals
Phyto-sanitary	Quarantine certificate, the phyto-sanitary certificate	Quarantine of plants
Sanitary-quarantine	Policy of medical insurance of the vehicle driver (crew), the health declaration	Revealing of patients, prescription of quarantine, survey of vehicles for infringement of sanitary norms
Quality assurance of cereal cultures	Certificates of grain quality and products of its processing	Quality of grain cereals seeds, leguminous and olive cultures, flours, groats, breads, bakery and pasta, mixed foddors, by-products of processing of grain

<sup>15</sup> Nikolaev D. O simphonyakh i serenadakh morskikh, v kamne I prosto na ulitsakh/ Mayak Baltiki. N 023. 10.06.2004. P.5 (Николаев Д. О симфониях и серенадах морских, в камне и просто на улицах/ Маяк Балтики. №023. 10.06.2004.с.5)

<sup>16</sup> [http://www.customs.ru/common/img/uploaded/files/technology9\\_\\_EV\\_.ppt#433,2,Slide 2](http://www.customs.ru/common/img/uploaded/files/technology9__EV_.ppt#433,2,Slide 2)



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Crossing of border at export-import transactions provides the organization of the control over the goods, the certain requirements to their certification and licensing, and also to vehicles. Systematized description of the boundary control is contained in the table 2.

According to the international law (for example Kyoto Convention, 1999) it is supposed selective inspection of cargoes at customs.

There are some problems in the sphere of Russian boundary control organization. Filling of a plenty of documents demands large time and financial resources. Some documents duplicate each other in the part of cargo specification, departure and destination country, loading and landing dates, etc. Control bodies have a little time to check documents under the intensive freight traffic. Its activity is badly coordinated. The excessive visual control, including cargoes of the companies worked without infringements of a customs mode, takes place also. Besides at an existing practice of check of documents only at occurrence of a cargo on boundary transition it is the extremely difficult to plan work of customs. Customs services haven't an opportunity to store and analyze large quantity of documents. Therefore the most part of cargoes is supervised visually.

Taking into account considerable part of transportation in the cost of a foreign-trade transaction, in the framework of international foreign-trade and motor-transport organizations conventions and other agreements on simplification of cargo and vehicle registration procedures (border, transport, customs and other types of supervision) during foreign-trade shipping operations (IRF, UN/EDIFACT and other) by means of motor transport are created and are in force.

Naturally, transportation of a cargo with status "internal" is less costly compared to similar transportation of foreign-trade cargo. Therefore, for preclusion of economic misdeed in the rules regulating shipping operations of "internal" cargo important role is played by sections accounting for identification of cargo status as "internal".

Entry of Lithuania and Poland into the EU resulted in special configuration of land frontiers of economic (customs, visa) space at the interfaces between KR and Lithuania. Geographically forced or economically appropriate transport communications determine the necessity of transit transportation of substantial part of cargo as "internal" through the territory of neighboring country.

Therefore, the main pilot region is in the frames of TEDIM the Kaliningrad area, and the basic pilot project is "Kaliningrad transit". Basic problems in transportation of Russian

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internal cargo flows between Kaliningrad region and other regions of Russian federation are as follows:

- Large amount of additional documentation and also subsidiary dues and payments of non-rail deliveries
- Obtrusion of payable veterinarian supervision on Russian forwarders by Lithuanian party in case of transportation of phytogenous and animal cargo despite the fact that the cargo goes as transit goods, sealed and there is an international standard certificate for it.
- Significant part of Russian auto carriers' does not comply with EU environmental requirements

So problems of cargoes transportation to/from Kaliningrad via Lithuania can be divided into their two groups. The first is connected with complexity of control procedures on border, with different (both substantial, and language) requirements to the necessary documents, the second with unreasonable payments, which carriers are compelled to pay for the imposed services of intermediaries on border (according to some estimations, up to 200 euros). For resolving problems specified complex information system of Russian Federal Customs Service (FCS) assumes to put into use electronic customs passports of the goods and databases of system of electronic declaring.

Investigation of document flow and at-border registration procedures in 2003-2004 by the Ministry of Economic Development and Trade discovered the following additional expenses of carriers during shipping operations between Kaliningrad region and the remaining part of Russia. Investigation of traffic in Kaliningrad region in 2000-2003 shows steady goods flow between Kaliningrad region and the remaining part of Russia, about 50 thousands shipments a year. Half of the shipping is Russian internal cargo (with strong growth of cargo share shipped from KR, which implicitly indicates stirring up of production in special economic area Kaliningrad region).

“Kaliningrad transit” project provides an introduction of electronic logistical services on railway transitions in particular. The programme is financed by the Ministries of Transport of the states-members EU, and also the companies. The programme provides<sup>17</sup>:

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<sup>17</sup> Materials of Working Meeting on facilitation of procedures of trade. Moscow. Chamber of Industry and Commerce of RF November, 22-23, 2004 (Материалы Рабочего Совещания по упрощению процедур торговли. Москва. Торгово-промышленная палата РФ 22-23 ноября 2004 г.)

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- Russian access to uniform electronic logistical space of EU;
  - ensuring compatibility of the information environment of Russian and EU's Electronic Logistical Systems;
  - development of recommendations on introduction of the electronic logistical technologies based on "Single window" system;
  - creating and using of electronic logistic resources.

### **3.3 Legal and institutional aspects of "Single Window" concept in the Russian Federation**

Models of electronic document circulation systems exist. The technical problems (purchasing of hardware and the software), and also training of customs officers depend on financing and competent planning only. However a serious obstacle for the realization of "Single window" concept is current legislation of Russian Federation. The legal base on electronic custom declaration in RF started to develop 10 years ago. It was caused by the sharp increase of goods flows in RF or through its space.

It is possible to distinguish several groups of basic legal documents in some way concerning using electronic documents in custom clearance:

- Strategic documents<sup>18</sup>;
- Normative documents<sup>19</sup>;

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<sup>18</sup> Concept of ICT policy of State Custom Committee (SCC) of Russia for 2001-2003 (elaborated in 2001), Concept of using ICT in activity of federal bodies till 2010 (elaborated in 2003)

<sup>19</sup> Federal Law on Electronic Digital Signature (Adopted on 26.12.2001). The Law "About the electronic digital signature" is important for development of electronic document turnover in Russia. There were a number of difficulties at realization of TEDIM project because of discrepancies in the definition of "the electronic document" concept. Among all, it is concerned definition of electronic document itself. According to the Law, it is the document where information is presented in electronic digital form. The bad thing is that this definition does not have the addition "if the document is signed with EDS". Without this addition, any files and databases can be considered as electronic documents. Electronic Digital Signature (EDS) is a feature of electronic document (ED) used for protection of this ED from falsification, which is got in the result of cryptographic transformation of information with closed key of EDS and allows to identify the owner of EDS certificate, as well as to determine the absence of spoiling information in ED. Trust to EDS is a key moment for contract dealing and transfer of property rights via electronic communication. The Law is a base for further development of electronic document flow in Russia. It should be noted that EDS technologies were used before adoption of this Law. The Order of Central Bank of Russia ((№02-59, 21.09.1993) set the state standard Electronic Digital Signature (Now the Order N02-12, 31.01.19950 is valid).

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- Interdepartmental Contracts<sup>20</sup>.

Another serious uncertainty is concerned the electronic document with EDS which makes legal consequences only in the case of realization of relations identified in the signature key certificate. It means that when using information of the electronic document as arguments, it is necessary to confirm that the relations authorized by the electronic document are the same as identified in the certificate. It may make any data from the electronic documents not valid as arguments at all, and the Law may lose its sense. The Law considers the owner of signature key certificate (as well as user of open key) to be a person, although electronic documents are mostly used by corporations.

The most serious disadvantage of the Law is non-clarified questions of legal consequences and responsibility for already created electronic documents, in the cases of temporary invalidity of the signature key certificate, its liquidation, invalidity of licenses of authorized centers etc. Also the rules of electronic documents data storing are not defined. It is uncertain, who stores the data, who inserting it to the information system, what is responsibility for data losing or breaking the secret etc.

Connecting Federal Customs Service of RF to Lithuanian segment of the New computer system of transit traffics EU (NCTS) depends on Russian institutional structure. The problem is what body of electronic logistics system will prosecute the

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Custom Code of RF (valid since 01.01. 2004, corrections in July 2004). The new Custom code (valid since 01.01. 2004, corrections on electronic forms of declaration in July 2004) lays the foundation for the electronic documents turnover according to the international norms. Article 1 of the Code marks, that "Russian Federation participates in the international cooperation in the field of customs regulation to harmonize and unify Russian legislation according to the norms of the international law and the used international practice". Article 63 says, that "the documents for customs registration can be presented in the form of electronic documents according to the present Code"

Federal Law on Information, Informatization, and Information security (adopted 25.01.1995, changed 10.01.2003), Federal Law on International Information Exchange (adopted 05.06.1996, last changes 29.06.2004), Federal Law on Licensing of single activities (08.08.2001). The Federal laws reflect separate aspects of functioning electronic documents. But these laws adjust special spheres of electronic documents turnover only and do not present the organization of electronic logistics process as a whole.

<sup>20</sup> Agreement on Information Exchange between Ministry of Transport and SCC of RF (N 01-11/9, signed on 08.04.2002). According to this agreement, Ministry of Transport and SCC carry out planned and operational exchange of information in electronic form both at federal (Central Computer Center of Ministry of Transport and Central Computer Center of SCC) and regional levels (Computers departments of regional divisions of Ministry of Transport and SCC). Aim of the Agreement is providing interaction between the Ministry of Transport and the State Custom Committee, to control deliveries of international cargos, raising effectiveness of the State control of international deliveries, as well as coordination of actions for protection of economic interests of RF.

general subjects (introduction strategy, the standards statement, development of statutory acts) and who will organize turnover and storage of electronic documents. At the moment control services on boundary transitions are subordinated to different state bodies. It is sensible to distinguish the following government structures involved in the control process at the border (see Table 3).

**Table 3** State bodies involved in the border control process

Type of control	Control body at the border	Federal Service	Leading Agency
Border	Border service	Federal Security Service	President of Russia
Customs	Customs checkpoint	Federal Custom Service (former State Custom Committee)	Government of the Russian Federation
Transport	Transport inspection	Federal service under the control over transport	Ministry of Transport
Veterinary and phyto-sanitary	Veterinary and phyto-sanitary service	Federal Service on Veterinary and Phyto-Sanitary Control	Ministry of Agriculture
Sanitary-quarantine	Sanitary-quarantine inspection	Federal public health service-quarantine	Ministry of Health
Quality control of cereal cultures	Grain inspection	Regional managements grain inspection	The Government of the Russian Federation

Effective activity of all participants of electronic logistic services system is possible in the case of their coordinated interaction at all levels – federal, regional and at the level of border checkpoints. Technical providing with modern computer networks, and the software according to the international standards of electronic documents is necessary for logistic business.

There is an important strategic document concerning with the application of information technologies “Concept of Information-Technical Policy of the State Customs Committee of the Russian Federation” at the federal level. The Concept reflects existing representations about development of an Information Infrastructure of Customs Service of the Russian Federation. The Infrastructure consists of the Uniform automated information system SCC/FCS of Russia, the Departmental integrated telecommunication network, techniques of the customs control and checking, the system of information protection of customs bodies.

## 4 Conclusion

Main volumes of goods are transported by sea. Logistic technologies are developed in the global scale. Port industry increases rapidly. Modern forms of port competitions lead to regulating their trade, informational, technological operations. Electronic Logistic Services allow to resolve complex problems of international trade. The principle of "Single Window" is a mean of application ELS idea. European countries and RF are involved in joint "Single Window" projects through TEDIM programme, in particular. "Kaliningrad transit" is an object of both EU and Russian attention. Russia reaches great success in ELS implementation.

The main priority of information policy is perfection of executive, legislative and judicial bodies interaction, and also federal, regional and local institutions on the basis of the general protected information environment. The interdepartmental electronic system of federal governmental bodies should provide an interaction of the state information networks, an automated data exchange at the interdepartmental level according to requirements and national standards of "electronic government". However, it is the first stage of electronic logistical services introduction in Russian Federation only, including the Customs activity.

For the complex decision of electronic exchange problems it is necessary to provide systematical consecutive resolving measures on:

- developing technical standards of electronic documents,
- appointment of ministries and departments involved in system of electronic logistics,
- organization of "step-by-step" planning,
- providing compatibility of the Russian and international models of electronic logistics,
- financing application of the electronic logistics model,
- lending private companies for purchasing of program and technical equipment,
- preparation and acceptance of an uniform package of documents or the law on electronic logistics.

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