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INTELLIGENT TRANSPORTATION SYSTEMS: INTERNATIONAL ASPECT

The most effective way to qualitatively solve the problem of road safety (RS) are Intelligent Transportation Systems - ITS. That is, ITS can be considered as the system that aims to increase RS in order to reduce road accidents. To coordinate actions to increase RS, the transport policy of many countries is aimed at integrating ITS into the single information space.

ITS is widely used worldwide and is one of the most effective ways to solve RS. At the same time, the expansion of ITS functionality for compliance with the RS in the transport process is associated with the development of new methods for assessing the quality and forecasting of traffic characteristics. Thus, modern research in the field of ITS construction is relevant and in demand.

In world practice, ITS is recognized as a transport policy, as "the ideology of integrating the achievements of telematics into all types of transport activities to solve problems of an economic and social nature - reducing accidents, increasing the efficiency of public transport and cargo transportation..." to improve environmental performance and ensure RTS. It should be noted that the world experience of formation and development of ITS has more than 40 years. Let's take a brief look at creating ITS.

The first stage in the formation of ITS in the United States is to be considered the emergence in 1960 of the Electronic Route Guidance System - ERGS. In the mid-1970s, the concept of ERGS was adopted as the basis for the Automatic Route Control System - ARCS. ARCS was the first example of the automated route support

system using digital maps [14]. The earliest prototype of ITS in Europe from 1970 to 1976 was the Autofahrer Rundfunk Information (ARI) system.

In 1986, the Program for European Traffic with Efficiency and Unprecedented Safety - PROMETHEUS was established. The driving force behind PROMETHEUS was the consortium of 18 European car companies. During the development of PROMETHEUS from 1987 to 1994, numerous ITS applications were developed, including the ARGO and VITA II intelligent vehicle projects.

The first stage of ITS development in Japan is considered to be the Comprehensive Automobile Control System - CACS project. In the early 1980s, work on the Road / Automobile Communication System - RACS project began, which formed the basis of the current car navigation system. Japan's ITS was further developed in the projects of Control Intelligent Management System - CIMS and Advanced System of Vehicle - ASV.

In Australia, in 1970, the Main Roads Department installed the first system, which covered 30 signaled intersections with centralized control and u1090 traffic (Traffic Responsive Capabilities - TRC). In 1985, the second generation Traffic Responsive Adaptive Control - TRACS system was installed. Further development of the TRACS system allowed the creation of the first version of ITS STREAMS in 1998. This system was the integrated ITS providing traffic control cycle management, highway traffic management, travel information and parking assistance.

It should be noted that in the USSR, attempts to build ITS began in 1975 with the creation of the "Traffic Management (Start)" System. In the mid-1980s the development of the first automated system "Traffic Management (ASUDD)" began. Further development of ASUDD took place under the influence of Western technologies.

According to S. V. Zhankaziev, "It is necessary to identify three world standardization systems that have the greatest influence in the field of technical regulation of ITS" [126]: ISO - International Organization for Standardization, where the field of ITS is regulated by Technical Committee 204 - Intelligent Transport Systems; CEN - European Committee for Standardization, where the field of ITS is

regulated by the technical committee (Technical Committee 278 - Road Transport and Traffic Telematics); ITS Standards of Japan - Japanese standardization system.Thus, advanced ITS architectures cover such functions as traffic management, public transport management, management of technical systems of vehicles, electronic collection of payments, emergency management in transport, management of goods and cargo transportation, information support of road users. At the same time, the main task of ITS remains the traffic police.

Based on the world experience of ITS development, it can be argued that ITS is widely used around the world and is one of the most effective ways to solve transport problems in order to maintain RTS. At the same time, ITS is seen as the integration of "information", "communication technologies and automation equipment" with the transport infrastructure. Scientific studies in the field of construction of ITS support subsystems is relevant and in demand.

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