Towards a new transportation culture: technology innovations for safe, efficient and sustainable mobility.

Russian practice.

Joint BELGIUM - UNECE Inland Transport Committee (ITC) workshop on Intelligent Transport Systems

17-18 November 2014
Brussels
Questions of ITS, particularly in the field of regulatory support system, are actively working within the framework of the Plan of research and development work of the Federal Road Agency for 2014 - 2016 years. However, one of the conditions for the design and implementation of modern Automatic Transport Management System and ITS is the availability of standardized technical requirements for their hardware and software systems, particularly, to their peripheral equipment.
The current system of standardization in Russia and the Member States of the Customs Union, in particular the Republic of Kazakhstan and the Republic of Belarus, in the field of display of dynamic information is insufficient and requires a separate standard, subject to the requirements of the technical regulations of the Customs Union “Road safety” (TR TS 014/2011) and harmonization with European standards.
Currently, the domestic regulatory framework has no document setting out the requirements for the placement of means of dynamic information display, in addition there is no common terminology and classification of display of dynamic information. For example, according to GOST 34 401-90 a road sign controlled selector and a pointer speed selector are referred to the means of displaying dynamic information. According to GOST R 52765-2007 means of display of dynamic information are defined as variable message boards. Separate rules for placement of means of dynamic information display, such as variable message boards are identified in GOST 52766-2007 and consistent with the placement of information signs 6.9.1, 6.9.2, 6.10.1 - 6.12 and 6.17 according to GOST R 52289-2004.
Examples of road signs

6.9.1. Advance direction signs

6.10.1. Direction signs

6.11. Name of object

6.10.2. Direction signs
Conclusion

Thus, in domestic practice actual thing is **establishing a unified terminology, classification and rules** for placement of dynamic information display based on harmonization with the requirements of advanced foreign countries and the countries of the Customs Union.
Ring Road in Saint-Petersburg

A-118 Ring Road, St. Petersburg
The length - 116 km
Data is collected by 410 transport detectors. By fiber-optic line data is coming to Control center, where automatic traffic management is occurred. There are 456 variable message signs, 38 boards of changeable information. Using 63 cameras, video monitoring and photo-shoots of traffic violations take place.
Ring Road in Saint-Petersburg

**Functions of Automatic Transport Management System**

- Monitoring of the parameters of traffic flow
- Speed mode operation,
- Dynamic routing of traffic flows
- Informing drivers about road accidents, adverse weather conditions, road works, etc.
- Automatic recording of traffic violations (29 lines of control)
Ring Road in Saint-Petersburg

Variable message signs and boards of changeable information

Control Center
Display Information Boards

There are 144 DIB in Moscow.

Boards are designed to inform road users about traffic conditions, changes in the organization of movement patterns and citywide events.

Information board is a LED (light-emitting diodes) screen of 120 DIB 3x4 meter, of 20 DIB - 3x3 meter.

Test information board is located in the courtyard of Situation Traffic Centre.
Test information board in the Traffic Management Center

Communication to DIB is carried by GSM-channel
Scheme of DIB placement (144 pieces)
Currently there are online information services displaying the situation on the roads. Information`s provided in the form of symbolic diagram of the traffic situation in the area of installation of the information board. Road conditions are calculated based on these road detectors belonging to Traffic Management Center (6800 pieces) and a public data service YANDEX.PROBKI
Period of updating information on the server is 3 minutes. Update period on the information board depends on the communication conditions - from 10 minutes to 40 minutes. In average - 15 minutes.
Also on boards there`re online information of the estimated time of movement from the board to transport purposes. As the transport purposes the largest transport infrastructure (highways, interchanges, railway stations, airports) and citywide marks are selected.
Also DIB provides messages about road works, promotion of road safety, citywide events, transport innovations etc.
Board management is centralized. Board state monitoring is provided automatically displaying the images by webcams.

Information on the board is placed automatically and manually. Schedule of accommodation allows you to organize any broadcast - constantly, on timetable, in relation to events, etc.
Thank you for your attention!

Vladimir Kryuchkov
ITS RUSSIA
CEO

vladimir.kruchkov@its-russia.ru

+7 (495) 543-13-46