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## **DISPATCHING CENTRALIZATION AND DISPATCHING CONTROL ON RAILWAY TRANSPORT**

*Abstract: This article describes the systems of control and management of the transportation process in railway transport. The main types of these systems currently used in the railway are also listed.*

*Key words: railway, dispatch centralization, dispatch control, dispatch control, station duty, train dispatcher, train traffic.*

The high level of requirements for the efficiency of transport management in railway transport determines the need for a high level of its informatization. Information technology today is becoming not just a means of supporting management, but one of the most important elements of the railway infrastructure. From the category of auxiliary means, they move to the class of basic technologies and are the defining condition for improving transportation management.

Optimal use of the capabilities of the information system of railways in the interests of the entire transport complex of the country can significantly reduce the cost of management and communication in the organization and implementation of domestic and international transport by various modes of transport, provides a significant improvement in the quality of transport and logistics systems [1].

The operational management of the transportation process on the railway is carried out and controlled by a dispatcher unit with shift duty - train dispatchers. The sections of the railways run by the train dispatchers are called

dispatching circles, their length reaches an average of 250 km or more with the number of stations up to 30. The boundaries of the dispatching circles are usually marshalling or district stations.

As a rule, the movement of trains through the stations and the execution of shunting work is promptly supervised by the station attendant, who coordinates his actions with the train dispatcher and clearly follows his instructions. However, there are sections of railways where at some intermediate stations there is no regular shunting work, and train operations are limited to passing, overtaking and crossing trains. The constant presence of an station attendant at such stations is impractical, and therefore operations related to the reception of departure and passage of trains are performed by the train dispatcher, i.e. the station is transferred to dispatch control [2].

The complex of telemechanical devices by means of which the control of electrical interlocking devices of intermediate stations and control over the movement of trains on the whole section are carried out by the train dispatcher is called dispatch centralization (DC).

The DC device allows you to control the turnouts by the signals of the line points (intermediate stations, siding, overtaking points) included in the dispatch circle.

Traffic control from the traffic control center without the direct participation of the station attendant ensures the clarity and efficiency of dispatch control, significantly accelerates the movement of trains along the section (by 25-30%), reduces the number of traffic service employees by 50-60 people per 100 km ways due to the elimination of posts on duty at stations and switch posts. All operations to receive the departure of trains from the station of the section are carried out by the dispatcher, and the regulation of the movement of trains along the haul is performed automatically by signals of automatic blocking.

Currently, DC systems are being designed and manufactured on new microprocessor circuits, the key device in which is a personal computer. Dispatch centralization of a new type is the Setun and Dialog systems.

On lines where most or all stations are served by station attendants to provide the train dispatcher with operational information about the train situation in the area controlled by him, dispatch control devices are used [3].

These devices transmit to the dispatcher's board information about the established direction of movement along the tracks of the tracks, the occupation of the tracks, the main and receiving-departure tracks of the stations, the readings of the input and output traffic lights.

Thus, the dispatch control system allows the station attendant to monitor the movement of trains on adjacent tracks and the state of their devices, and the train dispatcher to receive continuous information about the progress of trains on the site and saves him from many negotiations with the station attendants.

At present, automated dispatch control systems based on personal computers are being widely introduced. They are designed for real-time tracking of a dynamic model of the train position in the control area.

This system is a software and hardware complex that automates the work of a train dispatcher and other workers related to the safety of train traffic.

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