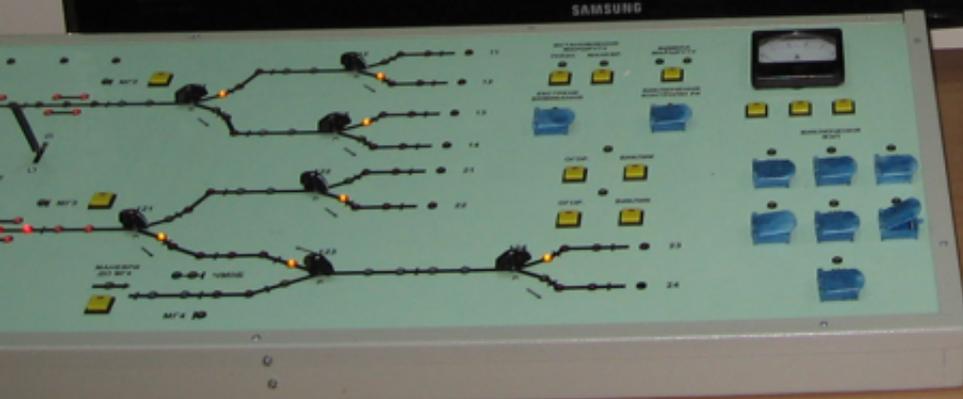
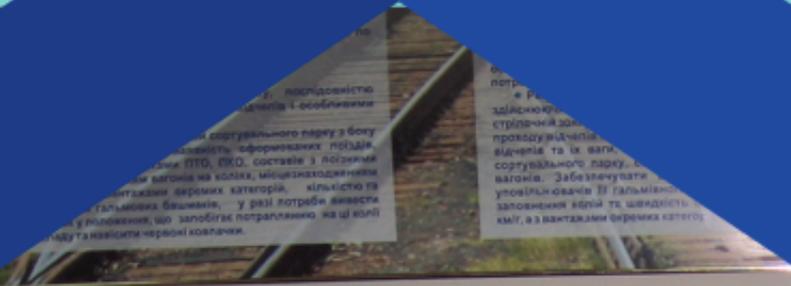




ООО "NPP KS-MISAT"

Marshaling yard simulator platform MYSP



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As analysis shows of domestic and world experience in the organization of safety on railway transport, one of the main causes of railroad accident, derailments and defects in work are, to a greater extent, incorrect actions of workers related to train movements and an execution of shunting work. That is, there is a human in the center of the railway safety system.

The complication of signaling equipment on the railway made it appropriate to use various kinds of simulators platform for training, knowledge control and personnel certification.

Theoretical training of future and certification of already-worked local train dispatchers (LTD) must be reinforced by practical exercises.

One of the subsections of the practical part is the training of LTD on so-called control panels simulating the control of the station, where they get skills of prompt response to non-standard situations and of the correct algorithm of actions to manage the train movements at a station and running lines.

At the beginning of the XXI century on the railways of Ukraine, more and more new signaling systems appear, accompanied by mandatory certifications and advanced training of maintenance and dispatcher staff.(further AWP) which, as practice has shown, reduced the influence of the human factor at the working process and facilitated the implementation of the tasks set. There were new automated workplaces (further AWP) which, as practice has shown, reduced the influence of the human factor at the working process and facilitated the implementation of the tasks set.



At the stations, new control panel with upgraded LED indication which improved the notification quality for LTDs and significantly reduced the burden on the vision organs of workers.

The repowering equipment not only did not cause difficulties with the development of LTDs, but it became much more comfortable for them to work.



The problems connected with training and staff development have remained relevant so far. According to that, research and development institutes and enterprises of the Ukrainian railways developed systems for simulating the control of stations operation and they were installed in passenger cars, which called simulator platform cars.

Nowadays, each of the railways: South-Western, Donetsk, Pridneprovskiy, South, Lviv, have at least one simulator platform car.



OOO "NPP KS-MISAT" is currently the leader in the implementation of such simulators platform at the Ukrainian railways.

Simulator platforms developed by our company allow to provide training, advanced training and testing knowledge of LTDs and marshaling yard operators.

In the simulator platforms are implemented all the algorithms of the signaling system with the route set (MRC-13) and GAC, the emulation of train and shunting movements at the station and hump yard area. The simulating platform provides for the introduction of all types of faults of MRC-13, GAC, emergency and non-standard situations. Technological communication is performed at a digital ATS. Staff conversation recording is performed using a speech recorder.



Work in the MRC-13 signaling system area is provided using indicator panel sections. Hump yard control is performed using standard hump yard indicator panel section. Displaying shunting situation in real time is performed with 32"-42" monitors, in 3D simulation mode with soundtrack of the shunting processes taking place. 3D visualization allows you in real time to adequately display standart (routine) situations and various emergency situations.



The newest development of "NPP KS-MISAT" is: "Marshaling yard simulator platform for the training office of the Osnova station and the Kremenchuk station of the Southern Railway.

- 5 stationary control panel sections, 2 of which display 2 stations with 2 double running lines and 3 workplaces: DSPG, the 2nd breaking position operator and the 3rd breaking position operator (or a hump yard brakeman post).
- A visual display using 3D graphics of the process of shunting cars on the hump, skills of working in the system with complex internal relations.
- There are wall presentations for theoretical training.
- At the same time, 10 people can be trained and tested at the car simulator platform.

The Implementing of simulator platforms will allow improving the quality of knowledge and skills of operational staff, what will greatly increase safety train movements.



“NPP KS-MISAT” has produced and implemented:

Car simulator platform

Car simulator platform of Lviv Transportation service Division.

Car simulator platform of Kherson Transportation service Division.

Car simulator platform of Poltava Transportation service Division.



Railway section simulator platform:

Railway section simulator platform of Kup'yans'k Transportation services Division;

Railway section simulator platform of Sumy Transportation services Division;



marshaling yard simulator platform:

Marshaling yard simulator platform for the training office of the station Osnova (South Railway, Ukraine);

Marshaling yard simulator platform for the training office of Kremenchuk station (South Railway, Ukraine).

Marshaling yard simulator platform for the training office of the station Nizhnedniprovs'k-Vuzel (Pridniprovs'k Railway, Ukraine)



OOO “NPP KS-MISAT” can develop any simulator platform according to your task for the various railway services

