

Birmingham L.R.T. System

The Birmingham Metro-tramway, which started operation in 1998, saw Project Automation carry out the installation and commissioning of a Centralized Signalling and Control System, upon order by Ansaldo Sistemi.

Today, after ten years, Travel Midland Metro, the transport service provider, has started a project for the complete overhaul of the centralized control and monitoring system in its IT and telecommunication network components. Therefore the company received a direct commission by Travel Midland Metro to carry out the required modifications. To provide the new services the well-known client-server platform Smartrams was proposed, integrating in one IT environment the main control functions of the tramway.

One of the design constraints that differentiates this intervention from ex novo installations, typical in case of the updating of existing installation, is the need to carry out all activities without disrupting or interfering with the normal circulation of trams and with the passengers service.

In order not to affect the safety requirements of the service the project also managed the organization of the "switch over" from the old installation to the new one, in such a way that the control centre operators would not notice any functional hindrance during the switch.

This need also required a special care in the assembly of the equipment and an in-depth testing process performed in the factory, with the help of simulators that could recreate the operative conditions that could occur during the system replacement.

The new network equipment, based on optical transmission technology, replaces a previous frame relay solution and provides the greater transmission speed and throughput required by modern applications for monitoring the line operation.



The tramcar localization function is provided by a detection stations installed along the line and connected to the Control Centre through the network. Position and time data are needed to coordinate the service and to inform the passengers onboard and at the stops and finally for the management of traffic lights priority in the intersections with the street traffic.

