



Network Rail

One platform for secure management of the UK rail power network

Network Rail, the GB's rail network operator, is using the Panorama platform as the backbone of its TPCMS (Traction Power Centralised Management) SCADA project. Telent and Ematics, CODRA's integration partners, have implemented the solution to control and monitor the traction power network across the UK.



Objectives



Integrated by
Telent and Ematics

CERTIFIED



The TPCMS project aims to:

1. A single national platform that enables local traction power control in each region,
2. Equip all control rooms with the same system functions and features,
3. Optimise operational efficiency whilst supporting safe operations.

Key figures

The TPCMS SCADA project:

- More than 1,200 remote outstations
- 2 redundant data centres
- 15 regional electrical control rooms
- 50 different technologies integrated together





CODRA's contribution

The flexibility of the CODRA's Panorama platform enabled Telent to integrate the following functions:

- Remote Secure: a mobile application for secure remote management of electrical isolations that enhances the safety of each track team. This innovative solution makes it possible to:
 1. Prepare and isolate sections of track prior to works being carried out
 2. Validate electrical isolations remotely via a secure mobile application, using two-factor authentication
 3. Gives each team independent safe access to rail the infrastructure
- DNP3 Driver: a generic protocol driver common across TPCMS and Remote Secure applications, capable of addressing both current and older outstation hardware and networks.
- Map View: an ergonomic, map-style user interface, allowing large-scale displays of the electrical network and the field equipment.



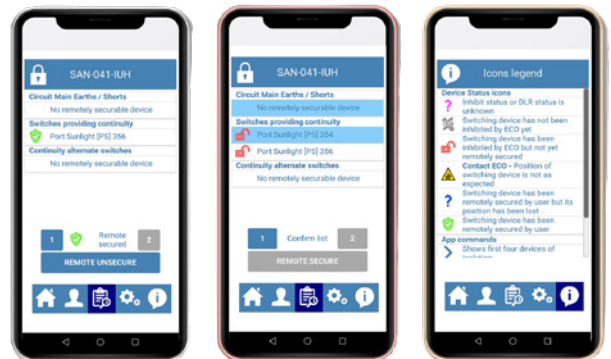
Deploying the solution

- The Panorama solution was rolled out in several phases, gradually replacing outdated existing SCADA systems.
- Compliance with IEC61508-SIL2 (safety integrity level) safety standards has been validated for Remote Secure and the DNP3 Driver developments by certified bodies.



Benefits

- Increased safety for maintenance crews on the tracks
- Faster, simpler track section isolation process
- Optimisation of downtime and operations
- Improvement of overall efficiency, hence reducing operating costs



The successful deployment of TPCMS has delivered safety and efficiency benefits, while replacing critical legacy control systems.

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