



TER Dakar

Network and rail transport operations

City of Dakar in Senegal is the economic centre of the region. To ease the flow of urban traffic and relieve congestion, the city has introduced initiatives to develop sustainable public transport. Due to enter service in 2021, the Dakar TER will provide a response to the challenges of pollution and traffic jams. The Panorama solution, deployed by our integrator partner Equans Ineo UTS, provides an integrated SCADA solution for the entire network.



Integrated by
Equans INEO UTS

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Keep traffic flowing smoothly and safely:

1. Monitor equipment in real time with a business-focused interface,
2. Maintain all network systems in good operational condition,
3. Locate faults quickly and intervene without delay.

Key figures

TER Dakar :

- 17 million passengers/year
- 55 km of railway lines
- 7 stations and 8 rest stops
- 22 trains

The Panorama application :

- 30,000 SCADA points
- 14 SCADA stations, one at each station
- 20 SCADA workstations in the maintenance centres
- 2 redundant servers near the Rail Operations





The application

The SCADA software is deployed in the Railway Control Centre, as well as in each station. Panorama is a genuine operational support tool, with an interface tailored to the needs of each manager and operator.

A safety and security Unified Control Centre application has also been introduced, providing a 360° view of the CCTV, access control, fire safety, platform access and ticketing systems. This unified solution will enhance the safety of both the infrastructure as well as the passengers.



Implementation

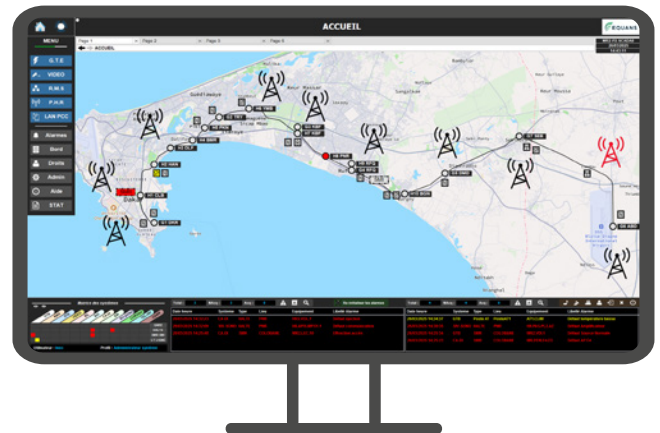
The SCADA application, accessible to the station and maintenance centre operators, is structured into several technical packages:

- **BMS - Building Management System:** Allows them to manage alarms and to intervene quickly in event of power supply problems, whilst supervising lighting, electrical panels, fire detection and control access.
- **FM - Facility Management,** monitors and controls the following systems:
 - Monitoring of the central time systems that, guarantee synchronisation of time via GPS to all of the information systems,
 - Railway signalling, including automatic train control and points,
 - CCTV, public address systems, passenger information and ticketing,
 - IP/MPLS network, railway telephony and GSMR.
- **Electrical Management:** Monitors the power supply to trains (catenary). Operators can isolate and de-energise certain electrical sections in the event of an incident on the line.



Benefits

- **Unified network SCADA:** centralised monitoring and management of all field equipment.
- **Centralised solution:** simplified updating for all operator workstations spread over the 55 km network.
- **Enhanced security:** workstations and equipment protected by a solution incorporating advanced cybersecurity mechanisms.



The Panorama solution has enabled us to develop a centralised application for the entire network in the Dakar region, whilst offering each operator a contextualised view for their role: station BMS, security, traction power, etc.

Anthony CORBIN

Head of rail and urban transport projects
Equans INEO UTS

nous contacter
+33 1 60 92 34 34

email
solutions@codra.fr

web
www.codra.net

CODRA