Network control systems

Controll system applications for local transport power supply.

Efficient control of rail power supply through network control systems.

Network control systems are used to control and monitor a wide variety of processes and systems, and the requirements for interfaces and scalability are high. For efficient operational management all relevant data needs to be available promptly and concisely.

Across systems.

Specialist departments often hold data related to rail power supply in different systems. With modern application software the information regarding all the current switching statuses of all substations, cables, cable distributors, overhead line switchgear etc. can be shown in a single system. The data of the different specialist departments can be automatically fed into the control system without the need for complex and time-consuming recreation of data, and where required made available, supplemented by up-to-date information, to other specialist departments using the export function.

Your benefits.

Efficient network control systems are characterized by user friendliness, the highest degree of transparency for the user, and easy integration of components into the overall system. To achieve this SIGNON offers tailor-made solutions. Consulting and planning form the basis for network control systems that are designed to meet the specific requirements of our clients.

Your advantages.

Complex Data - one system
You receive a control system with much functionality, based on a widely used basic system and adapted design to meet the requirements for rail power supply.

Simple Data Export
Existing CAD data serves as the basis for the visualization and electronic display of the rail power network. It is also possible to export current control system data into CAD systems for operational management and planning.

Client-specific Equipment
Refitting or exchange of hardware components in the area of rectifier substations with the possible integration of existing parameterization.
Our competences.

» Network studies for direct current or alternating current for local or long-distance railways
» Planning of rail power supply installations, overhead contact line installations, rail safety technology
» Development of simulation systems for traction simulation and network calculation of complex traffic systems (tram, metro, suburban railways, trolley bus, rail)

Our services.

» Concepts for network control stations
» Preparation of requirement specification documentations
» Planning for telecontrol components and networks
» Tendering
» Assistance in the award of contracts
» Supervision of construction
» Approval and acceptance
» Staff training

Reference.

Dresdner Verkehrsbetriebe AG as an example of system architecture for a network control station

Tasks

» Integration of new control station software
» Inclusion of all rail power supply installations
» Standardization of the network overview display
» Planning and realization in several stages
» Delivery of the application software

Installations in Dresden

» 50 rectifier substations
» 300 sections of overhead contact line
» 3,000 cables

Software development and delivery

» Introduction of an object oriented data model
» Installation visualization
» CAD based image creation
» Compressed representation
» Remote control/tracking
» Standardization of the network overview plan
» Recording of all operating equipment and their switching statuses
» Net colouring (electrical network topology)
» Additional functions e.g. flags, simulations, ...
» Extension of registration book management
» Improvements to the evaluation of disruption statistics