

Case Study: Substation SCADA Engineering and Commissioning

Provider Name	:	KALKI Communication Technologies (P) Ltd.
Client Name	:	Multinational Utility Automation OEM
Project Title	:	Sub-Station SCADA Engineering Design and Commissioning

The Requirement

The client, a Major Utility Automation Multinational required for their Sub-Station Automation project, SCADA Engineering and Commissioning Support. Kalki engineering and field services team, sat with the client team to understand the specifications and carried out the design, development, RTU Field drawings, SLD creation and tag database creation, and commissioning and hand-over at site.

The Solution

The following Resources were utilized to carry out the Engineering and Design tasks:

1. Client's Sub-Station SCADA Platform
2. Clients RTU Platform
3. End-Customer specifications
4. Communication Topology and Interconnect details

The said SCADA platform runs on NT System. The requirement consisted of one SCADA server and the number of workstations varied from 1 to 4 in each site. There were a total of 5 sites in the project. The RTU's were connected to the SCADA Control Room over IEC 60870-5-101 Protocol.

The entire drawings, Engineering and Single Line Diagrams (SLD) and system configuration were carried out in the development center. The Engineering and Interlocks were programmed and the SLD as per the specification were developed on the OEMs SCADA. The RTU's were tested with the stated DI/AI/AO points and communication issues checked. The fully configured system was made available for Factory Acceptance Test (FAT) by the end-customer. After approval the system was shipped to site.

At site, based on the detailed startup and commissioning plan, made a action plan to complete the different SCADA implementation, field-wiring and loop checking as well as communication establishment and data integrity checking. These steps were carried site in the order of readiness of the different sites. Once these were completed, the system was ready for Site Acceptance Testing (SAT) and hand-over.

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Tools Used:

- OEM Sub-Station SCADA
- IEC 60870-5-101 Test Toolkit Simulator
- NT Operating System Utilities for service management