

Electric Power Industry SCADA System



Overview

The Electric Power Industry SCADA System lab has been designed for laboratory and practical study of supervisory control and data acquisition in the power production and distribution domain.

The students may use the lab software along with the command console for the design of power networks and practical study of their architecture, calculation of main operational parameters of power stations and the power distribution system as a whole by mathematical modeling.

The test bench can also be used for the design of power network SCADA system, implementing the monitoring and control of its main parameters.

Features

1. Simulation of hydroelectric plant
2. Simulation of nuclear power station
3. Simulation of wind power station
4. Machine vision
5. Simulation of solar power station

List of Labs

1. Building SCADA system grid:
 - Setting up a network for the SCADA system
 - Creating the project database
 - Setting up the OPC server/client
 - Connecting the database to communication software
 - Designing the user interface
 - Creating an alarms and events system
2. Designing the power system
3. Power producers:
 - Hydroelectric power plant
 - Nuclear power plant
 - Wind farm
 - Solar power plant