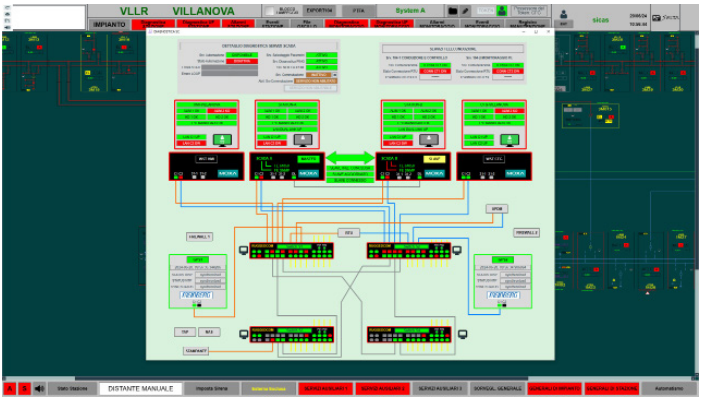
SCADA SOLUTIONS FOR SUBSTATIONS

An open and flexible platform
for grids automation and control

DigitalPlatforms realizes supervision, control and automation centres for the Utilities networks, integrating all the most advanced SCADA features in a single environment.
A distributed and open architecture, the possibility to choose the number of stations according to the type of application and to use processors with different technology keeping full compatibility with the programs and with the interfaces, besides the ability to be configured according to the plant and the specific man/machine interface are its main features, making it the ideal solution for the geographically distributed networks.
SCADA is a sophisticated supervision tool, which is able not only to easily transfer, process and store information, but also to create automatic procedures, to develop specific application functionalities, and to integrate itself with the corporate information networks or with Internet or intranet.
Offering several different solutions characterized by full scalability, SCADA allows carrying out supervision and remote control systems for small, medium and large networks, guaranteeing the complete compatibility with peripheral remote control equipment developed by SELTA or by other manufacturers. Furthermore flexibility and modularity allow creating customized solutions, realizing supervision centres with more man-machine stations, graphical monitors for each of them and each one with more independent printers. The constituent parts of the

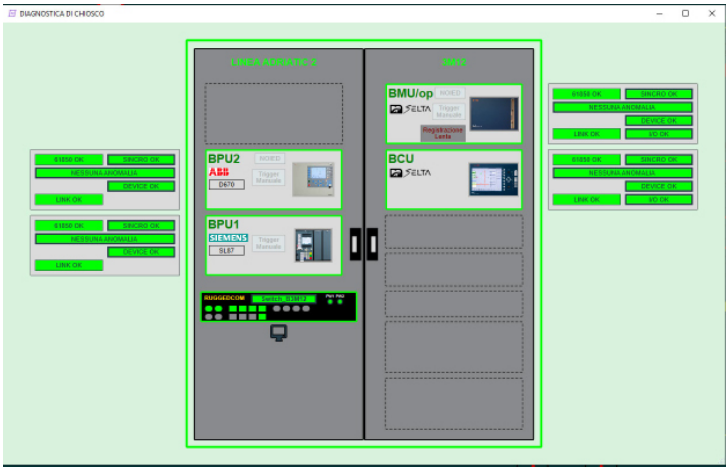
MAIN FEATURES

- SCADA applications, Front End, Historian, working individually or in hot backup
- Large number of HMI local stations with single or multiple monitor configuration
- HMI Web, with access from the WAN network and possibility to access all pages present in the station's workstation
- Different ways of GPS synchronization: Client SNTP over Ethernet, IRIG-B over optical fibre
- Possibility to integrate the supervision centre with those of the already existing networks (LAN, WAN)
- Integration of the network nodes diagnostic through SNMP protocol
- Customized hardware solutions: distributed along the network and over redundant architectures
- Historical archive on Oracle standard DBS, availability of applications to create reports and graphic trends



MAIN FEATURES

- Possibility for other business units to log in the Data Base through DBLink or Web Service
- Disaster Recovery functions with real time alignment of the Primary/Secondary
- Data processing function able to guarantee the highest efficiency and security levels
- Operating systems: MS Windows XP/ 2000, MS Windows Server 2003, Linux
- Standard communication protocols -IEC 60870-5-101, IEC 60870-5-104, IEC 60870-5-103, UCA 2.0, IEC 61850, MODBUS RTU, P6800, TD065, TIC1000, HNZ 66 S-13, DNP3.0, OPC Client/Server- allow interfacing with the plants
- A powerful configurator meets the most different conduction, supervision and control needs for every kind of plant
- Remote alarming with voicemail

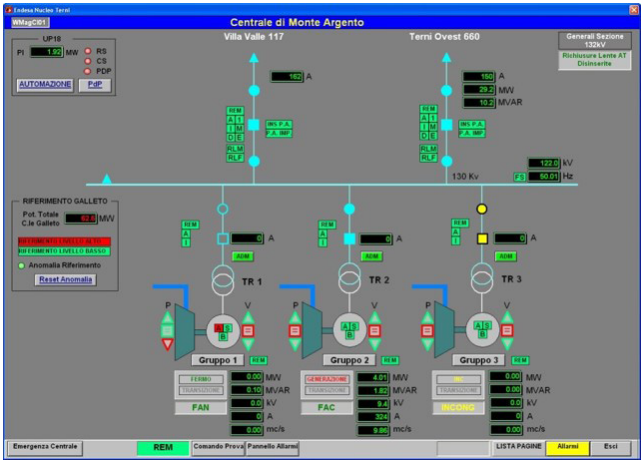


Application nr. 1- Electric power plants

- Compliance with the IEC 61870-5-101, IEC 61870-5-104, IEC 61870-5-103, IEC 61107 standards concerning the interoperability of the SELTA RTU (STCE/RTU) with those of other suppliers
- Remote control of electric and wind power plants, monitoring of the produced energy, forwarding of the production plans to field units

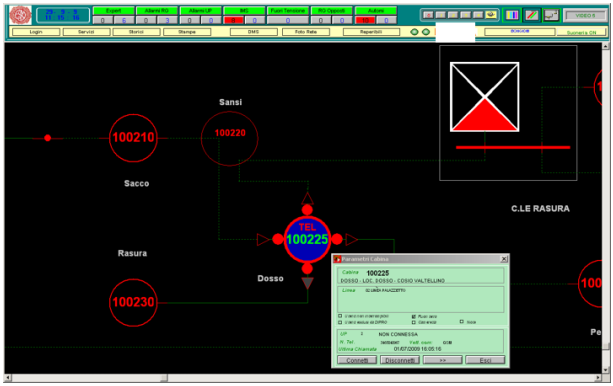
Application nr. 1- Renewable power plants

- Remote plant conduction through functions that allow creating new synergies between purchaser and supplier in the energy market:
  - performing of logic automation, regulation and calculation processes
  - interface to external systems for the managing and optimization of the production plans
  - implementation of the unbalance reduction procedures, compared to the production plan, through primary and secondary regulation ADM data analysis/storage (Metering)
  - Regulation of the plans according to the balancing production orders
  - Close cooperation of SCADA with the plant systems located within the production plants or centralized in the different business units
  - Production of graphs of the measurements and of detailed production reports
  - Gateway of communication with the National Grid Manag



Application nr. 2 - Distribution Management System (DMS)

- Compliance with the IEC 61870-5-101, IEC 61870-5-104 standards concerning the interoperability of the SELTA RTU (STCE/RTU) with those of other suppliers
- HMI function for the whole MT network visualization with several functions: zoom, pan and object search, symbolic representation of the network elements. Several visualization of the different levels of the topological:
  - energized/de-energized line
  - representation by voltage levels
  - representation by group guidelines
- Calculation of the single network nodes condition, of the group guidelines and of the voltage direction
- Analysis and search of the damaged lines
- Operation and shot storage on ORACLE standard DBS SCADA
- Station for the simulation and analysis of the information related to disruptions of the electricity supply:
  - validation of the operations recorded by the remote control system
  - offline network analysis of different standard arrangements or of the real disruptions recorded by the remote control system
- chronological reconstruction of the network feed outage and refeeding elements and validation of the operations
- Graphic tools for the configuration of the topological network:
  - graphic management of a single map as a single document
  - possibility to create several maps and to join them together
  - graphic processing of the network pattern
  - possibility to interface to NEPLAN
- GIRE application for the compliance with the Electricity Authority regulations concerning the “interruption registration requirements”.



Application nr. 3 - Substation Automation Systems (SAS) IEC61850 compliant

- Compliance with the IEC 61870-5-101, IEC 61870-5-104 as well as IEC61850 standards concerning the interoperability with IEDs of other suppliers
- HMI function for the whole VHV/HV/MV network visualization with several functions: zoom, pan and object search, symbolic representation of the network elements. Several visualization of the different levels of the topological:
  - energized/de-energized line
  - representation by voltage levels
  - representation by group guidelines
- Calculation of the single network nodes condition, of the group guidelines and of the voltage direction
- Analysis and search of the damaged lines
- Operation and shot storage on ORACLE standard DBS SCADA
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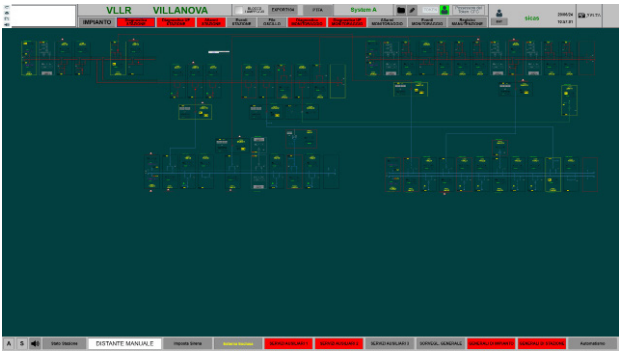
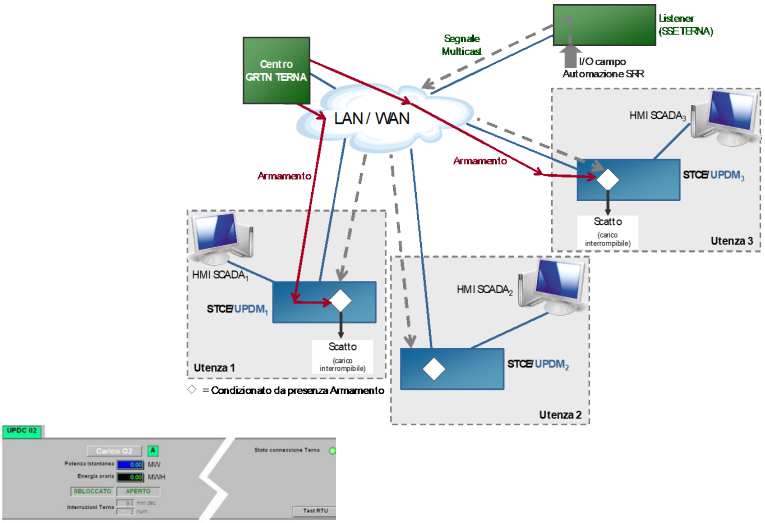


Application nr. 4 - Interruptible Users

- The supervision system is provided as an aid to STCE / UPDM SELTA devices destined for interruptible users and offers several features:
- representation of the state of installation and monitoring of data exchange with TERNA
- Dynamic status display of switches (open / closed, lock / unlock) and system diagnostics
- monitoring in control direction and armaments (armed / unarmed cargo)
- display of measurements of the individual loads and of the general ones of the establishment
- Total instantaneous plant power
- total plant hour energy
- Instant power sum of interruptible loads
- Monthly energy of the sum of the interruptible loads
- measurement and visualization of the timing movements of the plant organs
- file-based archiving of events and measurements with graphic representation and reports
- display and print alerts / field events in the journal book
- imposition of the test command.



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