SIEMENS

Multilevel Wind SCADA Center

Wind farm management with SIMATIC WinCC Open Architecture

SIMATIC WinCC Open Architecture – Multilevel Wind SCADA Center
Siemens has launched a new two-part solution to address the needs of wind turbine manufacturers as well as independent service providers: a turbine SCADA with long-term database and a central SCADA control center. Both systems come with a standardized operating concept and integrated communication.

Use of SIMATIC WinCC Open Architecture provides a foundation to open up scope for customers to upgrade the Multilevel Wind SCADA Center for their own needs. Qualified Siemens solution partners are available worldwide if help is needed to make adjustments and implement upgrades.

Your benefit
The integrated architecture and communication facility and the use of long-term databases on the turbine or farm level mean that service engineers can use a central application in the control desk to access the complete range of up-to-the-minute data from all connected turbines to carry out any kind of comparative analysis. This eliminates the need to dial into each turbine separately and change between different applications, while still allowing service teams unrestricted access to any online data, alarms and histories without compromising optimum troubleshooting and analysis. A smart data management system allows unrestricted data access to even low bandwidth connections.

The open nature of SIMATIC WinCC Open Architecture along with its long-term compatibility provides the optimum customer investment security over the long term. There are currently a large number of running applications based on SIMATIC WinCC Open Architecture that can still be upgraded and maintained even after almost 15 years.

General properties
• Open, adaptable SCADA solution
• Integrated turbine and farm SCADA architecture
• Diverse functions and interfaces allow integration of a wide range of plants and applications
• Secure, event-oriented, encryptable and seamless-communication – data consistency in the control center is ensured in the event of connection failures
• Multiple user roles – from on-site operating personal to the manufacturing service engineers
• High availability due to double redundancy
• SNMP network monitoring
• Individually configurable plant screens with live data
• Scalable
• Web capability and support for mobile devices
• Multiple languages – German/English and upgrade option for up to 40 languages
• Platform-independent and available for Windows, Linux and Solaris

Special functions
• Integrated master data maintenance
• Prepared for the application of RDS-PP
• Long-term turbine and farm data storage
• Integrated maintenance management
• Integrated Excel reports
• Plug-and-play configuration for convenient connection of new turbines/farms to the control center
• Tolerant to connection failures
• IEC 61400-25 based tree structure
  – predefined for 1,500 individual data items per turbine
  – preconfigured for the SIMATIC Wind Library turbine control

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Multi-monitor concept

- Multiple farm overview using geographical map module
- Farm overview with tree structure
- Farm overview in spreadsheet form
- Turbine detail view in spreadsheet and graphic form
- Log book

Integrated functions
- Integrated maintenance management
- Integrated fault log
- Overview assessment of different farms and turbines
- Up-to-the-minute values
- Freely configurable comparative trends
- Video management for access control

Summary
Integrated web-capable SCADA solution for the management of wind turbines, wind farms and central multi-park service center based on the SCADA system SIMATIC WinCC Open Architecture. Its open concept and the wide variety of available interfaces allow free configuration and optimum scope for upgrading.