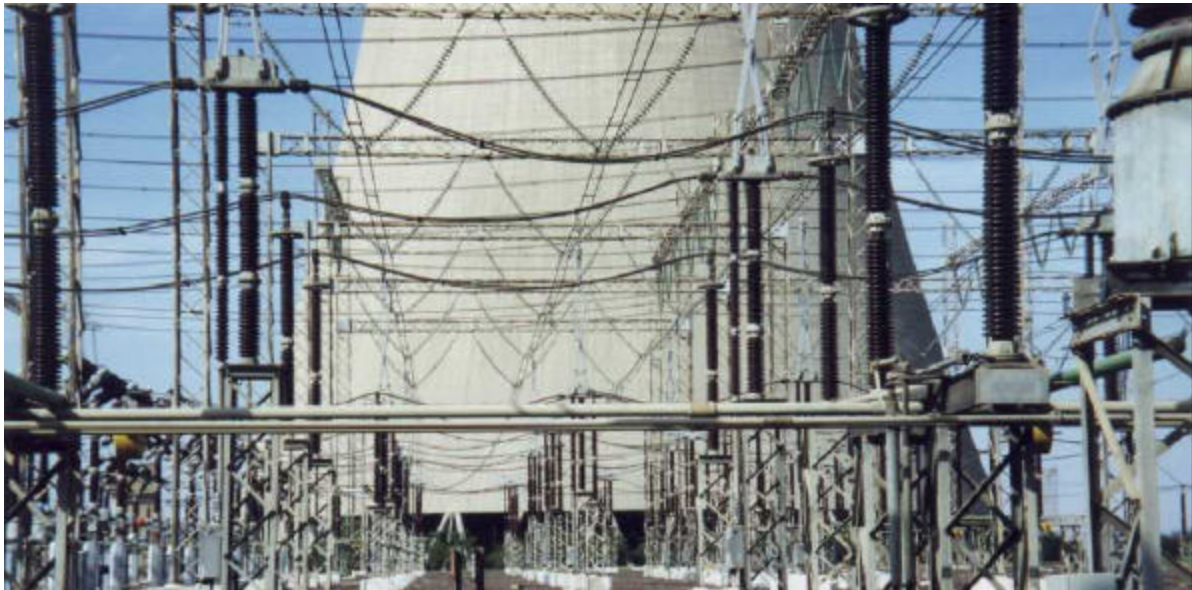


Doubletree Systems Inc.

POLARIS[®]

Online
Substation Equipment
Condition Monitoring System

A Totally Open Solution



POLARIS^â

Online Substation Equipment Condition Monitoring System

Continuously monitoring all the critical equipment in high voltage substations is a key to reducing maintenance cost and failure rate. Integrating all the kinds of technologies from different specialized vendors and even substation automation into one unified system is essential. A continuous monitoring and analysis system must be open, compatible with substation automation, and cost effective.

Polaris is the first open system available that provides user friendly automated data collection, alarming, data archiving, data trending, and data analysing for predictive maintenance.

Main Features

- Truly open and economical solution based on Windows 95/98/NT
- One uniform graphical user interface (standalone GUI or Web browser)
- One database source (ODBC) for all the devices data archives
- Local and/or remote access through WAN or phone
- Part of substation automation
- Easy adding or upgrading of new monitoring and/or analysis

Main Functions

- Data Collection from diverse kinds of sensors by different vendors



- ✓ Based on type of the sensors, provide necessary communication drivers
- Central condition data management & alarm/event logging
 - ✓ Any ODBC-compliant database
 - ✓ Automatic user-definable alarming/event notifying and logging
- Data analysis
 - ✓ Signature analysis
 - ✓ SPC analysis
 - ✓ Transformer top temperature modeling
 - ✓ Expert analysis, etc.
- Unified data presentation – local GUI or Web Browser
 - ✓ With security scheme, you can access the information via MMI or Web browser locally or remotely



Monitored Equipment

- Transformers
 - Gases-in-oil; Temperatures; Moisture;
 - Partial discharge;
 - Vibrations, etc
- Load tap changers
 - Temp difference/Index; Tap position/angle;
 - Motor current/Timing; Voltages, etc



- SF6 filled equipment
 - SF6 leakage; Pressures; Temperatures
 - Breakers
 - Speed(s); Arcing time and restrike; Contact wear; Motor currents
 - Bushings
 - Insulation index; Relative tan; Unbalanced leaking currents
 - Arresters
 - Leakage currents
- Others such as batteries, etc.

