The new Siemens Fleet Control System

Next Level of DCS and Fleet Management – in One Solution

Power-Gen Europe
June 12, 2012, Cologne

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The requirement: safe, profitable and environmentally sustainable - under more and more challenging conditions

- Political decisions/changing general business conditions
  - the new energy mix

  - Significantly increased complexity

  - Increase operational flexibility
  - Manage the information overflow

  - Contribute to security of supply
  - Ensure and improve profitability
  - Maintain environmental performance

Smart Generation
The energy system of power generators, power transmission, power distribution and power consumers is a complex, multidimensional and dynamic system.
The approach: Interconnect distributed power plants to a central command and control facility

Common management and control of widespread and distributed power generation assets
Central "Generation Monitoring and Support Center"

Origins target: Optimizing fleet control to gain a competitive edge:

- Improve production output and reliability across the entire fleet by
  - Implementing standardized dispatching
  - Managing diverse types of power plant
  - Improving analysis and reporting

The example Origin: Maintain maximum success with a heterogeneous and widespread fleet
The challenge on the generation side:
13 different power plants (gas, wind, coal and water)

- Different ownership structures
- Different feed-in conditions
- Different operational regimes (from base load to peak)
- Different DCS systems
- Huge distances
The challenge on the business performance side: 29 different functionalities to be implemented

- Inconsistency in dispatch methods
- Lots of different IT-tools
- Numerous interfaces and data storage places
- And even increasing asset diversity
The Origin-way:
Team-up with Siemens

Siemens as partner

- Almost all IT-functionalities available in-house
- Minimization of interface risks
- Built-in power generation knowhow
- Ability to integrate vertically and horizontally
- Integrated solution approach

Together we can make a difference.
The technical challenge: The limits of the “classical” approach limit the capabilities to handle complexity.

Intranet

Various IT tools, -systems and SW-packages with numerous interfaces and data storage places.

Data delivery: inform – monitor - report

Central control room

Automation: DCS systems control highly dynamic processes in real-time and milliseconds.

IT: MIS-, EAM – Systems provide decision making data.

Single power plants

- Process values
  - DCS – System 1
  - CCGT 1

- Process values
  - DCS – System 2
  - Wind Farm

- Process values
  - DCS – System n
The new Siemens Fleet Control System (FCS): The next level of DCS and Fleet Management - in one Solution

FCS combines the strength of two worlds

- Basis system: SPPA-T3000 DCS
- IT Applications: SPPA-M3000 Energy Management Suite

Central Process Archive + Smart Diagnostic Tools

SPPA-T3000
Process Information Management System
Generation Planning and Monitoring System
Early Warning System

Communication CS3000
Process Steps, Interlogging, Set Point, RTU reset
Process Values, Stati

Command and Control: steer - alarm - intervene

DCS – System 1
CCGT 1

DCS – System 2
Wind Farm

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The energy system of power generators, power transmission, power distribution and power consumers is a complex, multidimensional and dynamic system.
Thank you for your attention!
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