

CASE EXAMPLE

Controls Upgrade Using PLCs to Monitor Status of Over 145 Facility Fans

Application: Facility Automation & Control

ACS ROLE

ACS provided PLC and RSView 32 programming services. The new system that ACS developed consists of 24 Allen Bradley SLC 5/04 processors that are connected over multiple DH+ networks to a single master Control Logix processor with an Ethernet network and RS Studio ME graphical user interface. ACS provided full commissioning and startup support.

PERFORMANCE FEATURES

Programming - ACS provided PLC and RSView 32 programming services and networked existing SLC 5/04 PLC's into one common operating platform.

Platform - The new system that was developed by ACS consisted of 24 Allen Bradley SLC 5/04 processors that are connected over multiple DH+ networks to a single master Control Logix processor with an Ethernet network and RS Studio ME graphical user interface.

Commissioning – ACS provided full commissioning and startup support.

Panel Build – ACS provided an enclosure housing the Control Logix processor.

Field Devices - ACS provided 35 space temperatures sensors and 36 CO transmitters for the project.

DESCRIPTION

Challenge:
Client wanted to quickly and easily determine the status of 147 ventilation fans. They were spending too much time locally investigating the status of each fan.

The goal was a system that allowed an operator to easily see the status of the entire facility's ventilation system at a glance in an intuitive format to allow the interpretation of the information to be done very quickly and easily without the need for extensive training.

Solution:
The use of PLCs, instead of a traditional Building Automation System (BAS) hardware, resulted in a system that has more capability and flexibility than one based on a traditional BAS platform, which is typically used in these types of buildings. This flexibility allowed ACS to easily accommodate the client's additional request during commissioning, to add the monitoring of 35 space temperatures and 36 CO levels.

The robustness of the building management system was demonstrated after an incident caused the facility to fill with smoke. Responding to the emergency, a facility engineer used the BMS system to remotely turn on the roof fans from an off-site location. The intuitively designed interface allowed him to quickly identify and start all of the exhaust fans in the affected section of the building. Within minutes, the entire plant was completely evacuated of smoke - a testament to the power and flexibility of the building management system.

