

UPDATING A DATA ACQUISITION SYSTEM (DAS)

Do you have an aging Data Acquisition System (DAS) that needs a major upgrade or replacement? Maybe your computer system and interface is archaic? Maybe your DAS vendor is ceasing support and forcing an upgrade? Maybe you'd like to tie more information from your DAS into your plant DCS?

If any of these apply, you should know that there are many options available besides just staying with your current DAS vendor. For the most part, many manufacturers' DAS' are stand-alone systems that can tie into other manufacturers' CEMS. This means you have the option of shopping around and getting a new system that best meets your current needs.

Some of the advantages of upgrading your DAS include:

- Updated common operating systems, like Windows XP, which cut down training time and make it easier for new operators to get familiar with them.
- Additional features like Downtime Recovery which stores backup data in the event of a DAS computer or PLC-DAS communication failure – eliminating lost data.
- New report generation methods that allow easier customization and data manipulation.

- Networking of DAS computers to allow access from remote locations to reports and data.
- Updated PLC's which can tie into your plants DCS system via Digital, Data Highway or Ethernet connections – making it easier to share more information with less hard wiring.

Hardware

Many older DAS's utilize PLC's for their main controller. In cases where a non-obsolete PLC is utilized (like a GE Fanuc 90-30), a simple upgrade of the PLC CPU module and the PLC programming is all it takes to get into the 21st century. All the wiring to and from the CEMS stays the same, cutting down significantly on the cost of the upgrade installation.

In cases of an obsolete PLC, or an obsolete non-PLC controller, a new PLC is easily installed, again utilizing the same wiring to and from the CEMS. These usually fit in the original CEMS cabinet making installation quick and simple. The new PLC takes over the job of the old controller including; monitoring of CEMS data, calibration and probe purge control, alarming, and outputting of info to a plant DCS.

An operator interface panel can also be added to the existing CEMS cabinet offering local initiation of cal gases and cal checks (assuming solenoid hardware is present in existing system).

Software

From the PLC, new cable is often installed to connect to the new PC. Today's DAS's utilize state of the art PC's with the ability to tie into your plant's network, offering multiple DAS workstations anywhere in your plant.

Modern DAS software offers a wealth of features designed to make operation simpler with increased reliability. A Windows operating system also means easier access to the data.

Installation

Installation is very simple for most DAS upgrades. The PLC is replaced or upgraded, the DAS computer is connected, and the whole system is checked out. The specific programming of the DAS computer and PLC for your site is normally done before shipment. This minimizes downtime greatly. Often a DAS can be replaced in 2-8 hours, negating the need to wait until a plant wide shutdown to perform the upgrade.

Because of the ease of installation, a DAS manufacturer can usually offer a turn-key installation. This saves the added cost of involving plant manpower.

Cost

While every CEMS varies slightly from one installation to the next, a typical DAS upgrade with a new PLC and DAS computer can run as little as \$20-\$25,000.



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