Field Networks
More Capability and less cable too!

By using today's proven fieldbus technologies like Profibus and DeviceNet™, installation and configuration of field devices is greatly simplified. Alba Controls can help design and implement your industrial field bus network, large or small.

Background

In the old days, connecting and communicating with plant equipment was a laborious task. Hundreds of metres of screened cables and numerous analogue channels were required to get even basic information from devices like weigh cells, level meters and flow meters. Miles of multi-cores were needed to control a few remote installations.

What are Field Busses?

Field bus networks are usually connected to a PLC, DCS or other host, replacing point-to-point wiring of sensors, actuators, and other I/O devices with an open, multi-drop, bus type wiring arrangement.

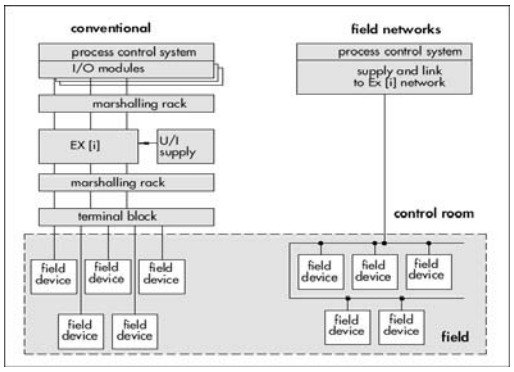
Why use them?

The networks are flexible and open and eliminate costly and time-consuming hardwiring.

Its not just the reduced cable costs, it's the combination of higher functionality such use more information and diagnostics for intelligent devices, but also the ability to compress project timescales as well as better flexibility to accommodate future needs.

Nowadays, the industry offers good device availability and support for field busses with little or no premium cost due to the maturity and competitiveness in this sector.

Even in the more conservative hazardous area market, great inroads have been made with field busses.



One of the key features of technologies like Profibus and Fieldbus; is that they are recognised International standards and not tied to any specific manufacturer. Numerous manufacturers therefore provide device network functionality as standard.

Our Experience

Over many years and projects with various blue chip customers Alba has accumulated experience of many networks. Our advice is well respected and we can advise on a variety of automation platforms including Siemens, Rockwell and Emerson.

Capabilities

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Industrial Networking: More Capability and less Cable too!

Application: Business Benefits

Here we will outline a very nice success story in one of our customers' plants in the Europe.

Speed to market and agility, fancy words indeed, here is a real story where the race to get a new product into a new market was a very serious business undertaking.

Profibus allowed the customer to

- Design plant software, process design, electrical in parallel.
  Getting to market faster.
- Easily add equipment to build more capacity as the business gained market share.
  Staged capital investment
- Faster to commission
  - less cabling
  - better test facilities
  - better diagnostics
- Process Development enjoyed richer information to drive forwards the product quality and manufacturing metrics.
- Less waste, intelligent instruments allow more in-line cross-checks to act on variances during production

Some numbers from this project

- 6 large Profibus networks
- Over 120 nodes
- Over 200 devices

Some of the devices in use included:

- Load Cells
- Variable Speed Drives
- Festo Valve Islands
- Mass flowmeters
- Instrumentation
- Special purpose OEM machines

It used to be the case that configuration of networks was a time consuming and complicated process. Not any more, many of the devices are virtually plug-and-play with little or no configuration. Previously only high specification devices could be networked, now it is possible for motor starters, regulator valves and even pushbuttons to be used.

Installation costs were cut by more than half. But even more impressive was the way engineering change could be handled. No one gets a plant perfect first time, but the rapid ability to implement change was astonishing.

The Bottom Line

In the current tough business climate companies need to leverage their existing assets and capital investments. Using field bus networks and devices is a good fit in today's complex manufacturing business jigsaw.

Alba Controls has the experience and can help your business get the best value from your plant.

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