



When Honeywell first introduced its Experion™ Process Knowledge System (PKS) Series A fieldbus integration in 2001, it was recognized as a high-performance, advanced solution that delivered best-in-class performance with exceptional system capabilities. Customers realized faster startups and decreased implementation costs. And for most industrial control applications using fieldbus technology at the time, the system offered more than enough capacity.

Two years later, the ARC Advisory Group predicted that end users would start moving into larger and more critical applications. Even so, it would've been hard for suppliers to predict how expansive many fieldbus projects would be. Initially, projects included hundreds of input-output (I/O) points; now, projects can include tens of thousands.

Vendors have gotten the message.

So in April, when Honeywell unveiled the latest version of Experion – Release 300 – it announced to the process control world that it could accommodate fieldbus process control projects of even the most impressive sizes.

Increased capacity

Experion's new Series C Fieldbus Interface Module (FIM) offers substantial improvements

in performance and system capacity. It provides four H1 links, doubling the per-module link count and reducing the number of FIMs required on any given project. A redundant FIM configuration is available, and the networked modules reside on Honeywell's patented Fault Tolerant Ethernet (FTE) network, an advanced networking system that delivers greater system availability as well as security. As with the previous Experion release, the FTE design reduces commissioning and maintenance costs because it uses well-known networking protocols and standards together with standard off-the-shelf Ethernet equipment to construct a redundant network.

But the place where the new Series C FIM really shines is redundancy. With Series A, Honeywell ran into a constraint limiting the number of redundant FIM pairs to 50 on a per-server basis. The Experion Series C FIM completely busts that bubble. Where the Series A FIM allowed for 100 links total, Series C expands that number to 500 per server. Since each Experion fieldbus link allows up to 16 device connections, Experion R300 can handle up to 8,000 field devices per server ranging from valves, to sensors to temperature transmitters.

Multiple Experion PKS servers can be seamlessly integrated with Honeywell's Distributed System Architecture technology to support large distributed plants and allow operators to see data from multiple locations. Since large jobs in petrochemical plants typically require tens of thousands of points, the significant improvement in the number of fieldbus links per server makes Experion R300 very cost competitive and ideal for engineers.

A seamless transition

When Honeywell debuted Experion R300, one of its most touted features was its ability to allow existing customers to seamlessly migrate to, or inte-

grate with, the new technology. The increased fieldbus capacity plays a key role in that concept.

Existing Series A FIM customers can expand with Series C or even transition to Series C, and the move is completely seamless – it doesn't look any different to the customer from what they were using before.

Behind the scenes, one of the key ingredients to making sure Series A and Series C are compatible is an extensive Interoperability Test program that recognizes the need for and importance of testing devices with the system. This program has been in place since before the 2001 introduction of the Series A fieldbus solution. Programs like this are actually carried out by all control system suppliers and have been found a necessary part of supporting fieldbus. Experience has shown that this additional testing is necessary despite the rigorous testing done by the Fieldbus Foundation™ and by device suppliers. Although individual practices and policies vary, the end purpose is the same – to ensure that available fieldbus devices work correctly and dependably with the control system. Interoperability testing helps ensure fieldbus projects, large and small, go smoothly.

Control system suppliers have responsibility not only for interfacing to and integrating with fieldbus devices but for the overall system control behavior, which includes function blocks in the devices. An aspect unique to fieldbus is "control on the wire," where basic control loops are run in the fieldbus devices. This is one reason Honeywell spends so much effort in testing control behaviors – it's the control system suppliers' job to make sure the part works correctly and that integration works as expected. In a large project, fieldbus may not be the first thing the customer is thinking about. And the last thing a customer should be worrying about is whether or

not a field device will work correctly.

What does all this have to do with seamless transitions?

The testing program is seamlessly transitioned to include both Series A and Series C FIMs. Leaving no stone unturned, the Series C FIM is being regression-tested on as many devices previously tested on Series A as possible. Any new devices to be tested will be done on both Series A and Series C, assuring continued support for customers of both new and existing products.

The Beat Goes On

It's impossible today in the technology industry to avoid buzzwords. The typical technology press release is bound to include words and phrases like "robust," "innovative," "comprehensive," "turnkey" and "mission critical."

There is, however, one particular buzzword that truly is meaningful and "mission critical" for suppliers and customers: Seamless. As in, seamless transitions.

With Experion's greater fieldbus capacity in release 300, Honeywell has taken its plug 'n play feature and has seamlessly given it the ability to handle more plugs. This increased capacity allows it to support more connections from devices, thus supporting larger projects than ever before. And seamless device interoperability testing insures that fieldbus devices work as intended with Experion. For more information contact john.yingst@honeywell.com

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John Yingst is Senior Principal Product Manager assigned to Systems Marketing, presently responsible for Experion PKS Fieldbus development.

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