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ON THE BUS

Right Message, Right Person, Right Time

Digital integration of field devices—whether through proprietary protocols, HART or fieldbus—can provide an opportunity for significant business results, but only if key players know where to find the data and what to do with the information. Cryptic messages, alarms or diagnostics that have to wait for Bubba to show up on Monday can

put a crimp in your efforts to harvest the benefits of device intelligence.

Our plant just underwent a brief “swoop-down,” during which a flowmeter with “plugged impulse line” detection went into alarm. The device in question has an option to “affect signal status,” which transmits an “uncertain” status—specifically, “uncertain subnormal”—along with the DP measurement, when the diagnostic is invoked.

I didn't see the message until a few days later. It was a false positive generated because the line in question was blocked in—and an example of data not being equal to information.

Operators—the pilots of our process plants—have an interest in the validity of measurements. In the case of plugged lines, they can understand the alarm and its consequences, and can take action more-or-less immediately. Why can't I get them this information in a way that's more meaningful?

A clever graphics designer who happens to know the specific integer value of “Uncertain Subnormal” perhaps will have the time to customize the graphics to display “plugged line detected” instead. But by the time that designer comes along, you could be years into your fieldbus, with a half-dozen installations behind you that could have benefited and a repertoire of standardized graphics and modules that are difficult and expensive to change.

The Emerson DeltaV system uses a capability called “Plantweb Alerts.” With post-2004 versions of Emerson software, you can enable devices to send “device alarms” directly to the system. The problem has been, unless you had Emerson devices of recent vintage as well, everyone got all the alarms generated by devices, regardless of priority.

If you happen to have the latest Rosemount transmitters or Fisher positioners, these have the added

capability to route specific alerts to either “maintenance” or “operations.” This feature gets very close to solving this issue for users: A few mouse clicks can potentially get that message to the right person at the right time.

In our case, we focus on instruments in critical services and expand from there. Sometimes, the diagnostic you think is meaningful to your operations organization isn't available as an “alert” that can be routed to the person who can use it. For instance, the plugged line diagnostic is categorized as “maintenance”; at the moment there is no option to elevate it to operations. So I'm back to creative graphics—if I don't want to wait until Monday morning when, we hope, Bubba finally looks at the PAMS alerts. If a plugged line has the potential to impact your process more-or-less immediately, this is not an acceptable option.

But there is good news. Emerson has announced that the technology for Plantweb alerts will be released as an open standard. Not long after, Fieldbus Foundation is releasing a new standard, based on NAMUR NE-107, that addresses this very issue.

Similar to Plantweb alerts, the standard calls for devices and the host systems to support four levels of alarms/alerts for field devices. Once integrated into products, an end user will be able to classify each device alert/alarm/diagnostic as critical (failed), maintenance, advisory or a fourth category: “device being serviced”—what Herman Storey calls “Bubba's workin' on it.” Users will have the capability to route each alert according to their individual preferences.

In the battle to distill useful and timely information from the tsunami of data available in smart devices, having this capability in brand-agnostic form—will be a huge benefit. Be sure your favorite suppliers are getting ready to deliver it. ■



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Data doesn't always equal information. Why can't we get alarm information to our operators in a more meaningful way?