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PROMOTING EXCELLENCE IN PROCESS AUTOMATION

## *Location and Time Barriers Can Be Eliminated, Creating More Profitable Solutions*

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[ABB's](#) value-added services can be coupled with the skills of subject-matter experts from around the world to monitor, diagnose and optimize process automation systems and associated industrial equipment. The ABB remote connectivity solution is applied with advanced diagnostics and data collection tools to provide levels of access and maintainability for ABB equipment or monitoring of PCs in any environment.

Remote condition monitoring, periodic system performance audit, remote-enabled troubleshooting and SupportLine with Sentinel bring quantifiable value to customers, said Larry Andrews, ABB product manager, automation services, when he explained the solution at ABB Automation & Power World this week in Houston.

"There are a number of services that are enhanced by the remote connectivity," said Andrews. "Technical support is one of them. We've had troubleshooting sessions going on, and the direct view of the system or direct trade of information is just more enlightening. Health checks, diagnostics, asset monitoring, asset optimization, fingerprints, loop/boiler tuning and monitoring, security validation and security backup are other services that remote connectivity can enhance."

Andrews also offered three remote-enabled scenarios that had beneficial results. Technical support can be improved by providing additional information for conducting troubleshooting over the phone. Field service is much more cost-effective when a windmill turbine drive can be checked with just a log-in, instead of sending someone there to climb up the windmill, and optimization services are improved financially when an optimization engineer can make a follow-up consultation without the cost of a visit in person. Plus, the follow-up occurs sooner.

Remote connectivity enables all facets of ABB's diagnose-implement-sustain cycle, but one of the first questions that inevitably gets asked is about security, explained Andrews.

"In the customer's network is a dedicated node for a remote connection," said Dave Carney, customer delivery manager at ABB. "Between the node and the Internet is a firewall for encryption and data security. On the other side of the firewall is the ABB server, and from there we have the ability to connect anywhere to our technicians."

All the communications are based on outbound requests, and the firewall only allows an outbound request from the secure node, said Carney. "The only communication allowed is one initiated by the customer node," he said. "The customer has specific and granular control over whether communication is allowed. When the agent checks to see if a request is made, a screen will pop up to the local operator asking if a connection will be granted. And there's also a log file, so a recording can be viewed of the session to see what the technician did to solve the problem."



"Whatever seven basic yoga moves need to be done to gain access, we can accommodate them—we're flexible." ABB's Dave Carney discussed how the company can help streamline diagnostics and provide other remote services, while accommodating end-users' network security measures.

The customer also can define specific time periods for remote connection. "You also can have a read-only policy so the technicians can simply advise you what to do, like a shared desktop session," explained Carney. "And we can accommodate VPN access. Whatever seven basic yoga moves need to be done to gain access, we can accommodate them—we're flexible. Whatever security you have in place, we don't override that. We'd have to be granted a username and password or just view what is being done."

The site administrator can control the data collection and controls the data flow. All of this security is controlled at the site, before it even

gets to the firewall.

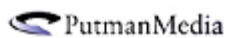
The ABB solution model starts with the performance engine and then looks at corrective actions and applications. These create remote-enabled core services, which include

performance fingerprinting (auditing), scanning (periodic reporting) and tracking (condition monitoring).

"In the performance fingerprint, we visit, interview the customer, talk about the potential return and talk about control system architecture and configuration," said Andrews. "We make first-pass recommendations. Then, off-site, we create a detailed analysis, reporting and action plan."

To diagnose performance, or fingerprint, the cyclical process includes implementing improvements, sustaining performance and realizing results, which returns the process to the implementing of new improvements.

The control system life-cycle assessment includes service modules, such as software audits, controllers and communications hardware audit, firmware audit (which can compare versions remotely), condition monitoring, control system server backup service, security policy validation, power and ground audit, system database and configuration validation and parts fingerprinting. "Many of these are done more easily with remote diagnostics," said Andrews. "In Harmony control system diagnostics with System 800xA, for example, we can look at node performance, loop performance, power supply status, CPU and memory utilization and verify that critical processes are running."



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