

Setting the Standard for Automation™

Automation Services for the 21st Century

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Industrial Service Areas



Early days of Automation







Few units

- >
- Data collection difficult
- Range of control limited
- Troubleshooting very hands on
- Space defines number of controllers

Modern day Automation



- Data easily accessible
- Range of controllers extensive
- Hard drive defines number of controllers
- Troubleshooting is digital

Can't use yesterday's service methods to solve today's problems



Many units



Automation System Performance



A well tuned control loop will improve performance and production when utilized.

No service done in over 5 years!!!

Industrial Trends in Control Performance

Half life of process Controllers Given: 100 PID loops all tuned at once. Then: within 6 months, 50 of these loops will degrade in performance.



Simple PID utilization



PID Controllers are designed to:

- Regulate the process
- Reduce product instability
- Improve operations

However, customer data shows:

- PID loops are not being maintained.
- PID loops have degraded.
- PID loops are standing in the way of production and performance.



Service Categories and Definitions

Hardware (I/O devices)	Automation Platform	Control Utilization	People
Valves Transmitters Controllers Displays Power Air	Sytem loading Transfer rates Data collisions Communications Firewalls, security Software/Firmware levels	Loop performance Alarm handling Process sectioning Tuning models Bump tests Interactions Control Logic	System and Process training Certification Support
Maintenance Management System	Maintenance Management System	Special tools, Service hub, Remote access	Training, Certification, Call center

- Preventive Service that is done on a scheduled basis that involves physical inspections or measures.
- Support Service related to operator training and technical training
- Administration Effort to maintain the service maintenance schedule
- Scheduled Corrective Corrections that are found during preventive maintenance that can be scheduled during an upcoming down time
- Optimization (of Process) Service activity aligned with performance, quality, or production improvements
- Unscheduled Corrective Corrections for failures that were not caught during the preventive maintenance schedule.



Service Distribution: Case Study



Service Management – Balance Service Delivery Proper distribution will reduce the risk of unscheduled down time





Goal Proactive Reactive

Reactive training is inefficient. Hard work and efficient work are not the same.

Modern Workbench Tools



ISA



Continuous Improvement



ISA

Service System Requirements

- Proactive maintenance plans Keep track of work done
- Focus on utilization of the automation control system
- Problems fixed when they are identified and corrections recorded
- Access to support
- Dedicated Service Hub that is separate from the control network.
- Up to date tools for efficient data mining, troubleshooting, and implementation.
- Certification and training programs to ensure individuals are qualified to perform service.
- Periodic evaluations to ensure that the ratio of preventive to corrective maintenance is being controlled.

Preventive

What makes Automation Services?









ISA

Skilled People

Proven Methods

+

+ Workbench tracking Tools Service Portal

+



Well Balanced Life Cycle Service Program

Presenter

- Kevin Starr works for ABB Process Automation Division and has worked for ABB for over 26 years. He is currently responsible for the development and implementation of service solutions that result in the increased life cycle and utilization of Industrial Automation systems. He holds a Masters degree in electrical engineering from Ohio State University, and a Bachelor of Science degree in electrical engineering from Ohio University, both with emphasis in process control. Since then, Kevin has installed, tuned and trained on industrial process control systems, controllers and instrumentation. He had an article on Asset Optimization published in the first edition of Pulp and Papers Solution Magazine. He has written a book on process control, "Single Loop Control Methods", that has sold over 3000 copies worldwide. He currently has 12 patents as a result of his efforts with process control.
- In 1986, Kevin started working for ABB's pulp and paper division. He was responsible for installing and tuning ABB Paper Control products. In 1990 Kevin started working as an instructor. He developed training courses for system operation and process control. In 2000 Kevin worked with the research and development group to create machine direction, cross direction, and remote monitoring products. In 2003 he became part of the US Pulp and Paper service team. In 2007 he became part of the global service development team for all of ABB's industrial service products.

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