Optimize Your Machine
HMI Innovation and the Next Generation of OEM Equipment

June 10, 2021

WEBINAR BRIEF

PRESENTERS: John Clemens, Director of Extrusion Controls, Davis-Standard, Ranbir Saini, Automation Business Leader, GE Digital, and Tom Schiller, President, AutomaTech

MODERATOR: Paul Heney, Vice President and Editorial Director, *Design World*

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Overview

Human machine interface (HMI), a dashboard used to control machinery, continues to evolve within industrial applications. Cooperative partnerships among technology companies, value-added resellers, and OEMs accelerate the application of these HMI innovations, which strive to meet standards of Industry 4.0 and the Industrial Internet of things (IIoT) while providing end customers with increasing value.

Davis-Standard, a global polymer processing solutions provider of highly engineered equipment solutions and ser-vices, worked with GE Digital and AutomaTech to revamp its HMI on customized equipment, and also to implement a historian tool to help pinpoint customer problems and better understand customer usage of equipment, and an DS-Activ to begin offering advanced analytics. These devel-opments illustrate how the next generation of OEM equip-ment will help OEM customers drive profitability into the future.

Context

Executives from GE Digital, AutomaTech, and Davis-Standard shared how they have worked together to bring various aspects of HMI innovation and expertise together to deliver next-generation OEM equipment.

Ranbir Saini discussed three key ways that technology inno-vators must support their resellers, and ultimately, the OEM and its customers, in implementing HMI. Tom Schiller then added how resellers of HMI technology must add value by matching and customizing this technology to specific OEM requirements. Finally, John Clemens described how he has worked with GE Digital and AutomaTech to begin imple-menting a next-generation HMI system at Davis-Standard.

Key Takeaways

#1 - Industrial innovation requires a company that helps resellers and OEMs learn about its technological solutions, enables resellers to bring solutions to their markets, and supports those solutions to delight customers.

GE Digital not only provides automation software to the industrial market but focuses on these three areas—learn-ing, innovation, and support—to help its reselling and OEM partners succeed.

Figure 1: GE Digital OEM Program: Drive the mutual success of OEMs and GE Digital
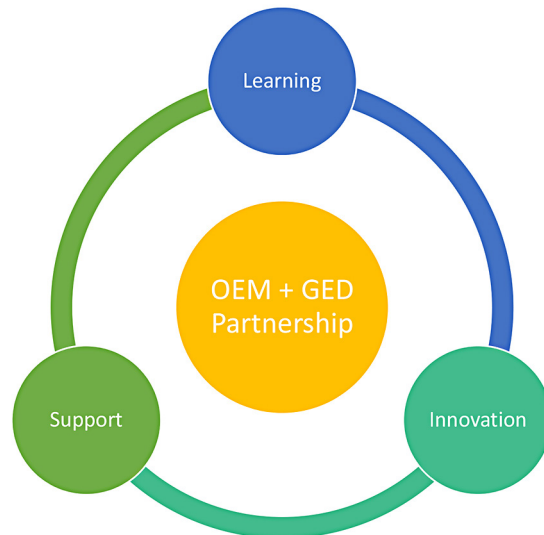
- Learning. GE Digital provides easy ways to learn about technologies and solutions through:

  — Proxy training catalog

  — On-demand learning courses

  — Webinars

  — In-person meetings

- Innovation. GE Digital delivers what its customers truly need by:

  — Enabling the connected worker

  — Providing accessibility such as thin web clients for remote access

  — Tapping into historical data to generate multi-year plan operations

  — Focusing on centralized management

  — Creating web-based configuration environment

  — Simplifying installation and updates in a single platform

- Support. GE Digital furnishes assistance through:

  — Certification badges

  — Promotion and marketing system

  — Conversion assistance program

  — Long-term support throughout customer lifetime

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The three key things we focus on are helping you learn your products and technologies, enabling you to bring innovative solutions to the market, and supporting delivery of solutions that delight customers.

— Ranbir Saini, GE Digital

#2 - Resellers serve as an invaluable bridge between technology innovators and OEMs.

Today's industrial OEMs need the expertise and experience of resellers such as AutomaTech to take full advantage of innovative HMI technology provided by vendors such as GE Digital.

Value-added resellers understand both the technology and the industrial market, which helps OEMs implement solutions more quickly and efficiently. Here are some of the benefits they offer:

- **Understanding industrial equipment.** Whether an OEM uses extruders, fillers, packaging machines, or other equipment, a reseller has probably applied HMI technology to similar machines before.

- **Best-of-breed at the best price.** Resellers can help select the best solution for an OEM's unique business situation by pulling from a vast knowledge of different technology and their applications.

- **Marketing and sales support.** By providing HMI technology training and education, resellers can help OEMs maximize the resulting competitive advantage. OEMs can learn how to share the benefits of the technology with their customers.

- **Keeping abreast of latest developments.** Resellers stay on top of developments such as Industry 4.0, IIoT, remote connectivity, and data collection and analysis, which allows them to share these technologies with OEMs at the right time and for the right application.

- **Licensing privileges.** By working with a reseller, OEMs can obtain licensing for technology provided by vendors such as GE Digital at no additional cost.

- **Application conversion.** When time comes for an OEM to renovate equipment, one of the biggest challenges can be the conversion of the application. Resellers can help OEMs revamp technology as needed.

We're not going to just throw you the software and have you do it yourself. We will either teach you how to do it, we'll help you do it, or we'll do it for you.

— Tom Schiller, President, AutomaTech

#3 - OEMs must transition their many different customer platforms and control systems to Industry 4.0 and meet evolving HMI standards.

Elements of the transition include:

- **Third-party equipment interfaces.** Although operator interfaces don't change often, every three to five years, how industrial control systems interface with third-party devices tends to change. Current trends point to easier-to-read dashboards and data-driven displays.

- **Updated screen design.** Although industrial control systems themselves are mature, user interfaces must be improved. Conventional designs tend to highlight too many data points on a screen, making it difficult to focus on critical issues. Updated designs grey out everything except important status alerts, providing faster notification of issues that require attention.

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Figure 2: Before and after screens for high-performance HMI
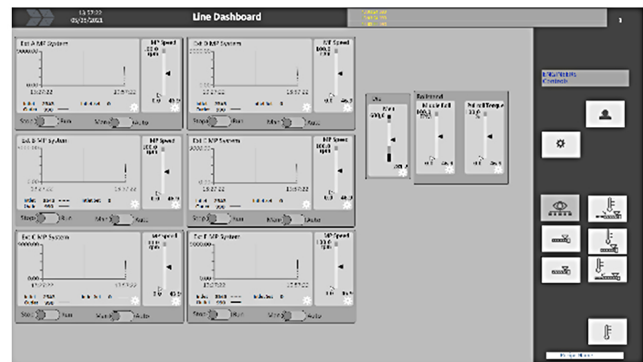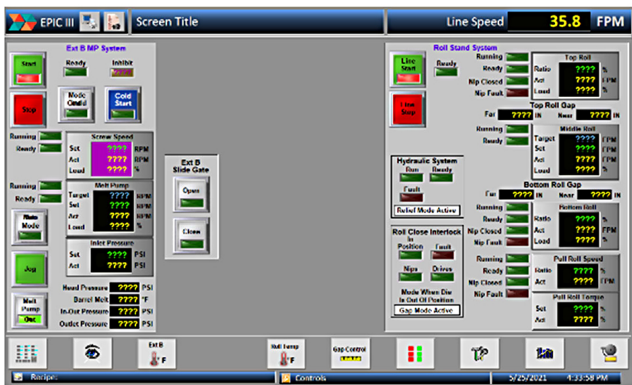
- **Event log and historian tools.** Both these tools are invaluable to OEMs for troubleshooting customer issues. OEMs can return to any time frame and examine things like motor load, screw speeds, and gauge readings, easily identifying issues and areas requiring service or repair.

- **Symbol-driven tool bars.** OEMs are working to cater to the next-generation professional: Millennials who have grown up with intuitive interfaces. Using universally accepted symbols simplifies end-user interfaces and also helps overcome some language barriers.

- **Planned downtime.** Unplanned downtime is a costly problem for many OEM customers. By employing an DS-Acti✓ platform, OEMs can help monitor industrial equipment for unusual changes that might indicate maintenance activity is required. A planned downtime can then be scheduled before major problems occur, improving quality and efficiency in the long run.

#4 - HMI innovation provides OEMs with a value-added service to offer customers in the future.

Long-term data collection in the cloud will provide the monitoring necessary for OEM customers to improve their performance.

We see this as a service option we can provide customers on any system that uses a PLC. As the Industrial Internet of Things grows, this is something that will become standard on all our systems.

– John Clemens, Davis-Standard

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Speaker Bios

John Clemens
Director of Extrusion Controls, Davis-Standard

John Clemens has been with Davis-Standard, a global leader in the design, development, and distribution of extrusion and converting technology, for 33 years. During his time with the company, John has held several engineering management roles. In his current position as the director of extrusion controls, he oversees all the automation and controls of machine lines. John has been instrumental in the digital transformation journey of Davis-Standard to providing the market with smart extruders. He is a graduate of Florida Agricultural and Mechanical University.

Tom Schiller
President, AutomaTech

Tom Schiller has over 30 year of experience in Industrial Automation. He started out working in chemical plants automating the processes and switched to distribution where he founded AutomaTech in 1995. He has since been leading and growing AutomaTech into one of the largest high tech automation distributors in North America. He has founded several startups within AutomaTech, the latest one FacilityConneX, a SAS solution focused on Equipment Optimization and Predictive Maintenance. AutomaTech is a leading reseller for companies such as GE Digital, Moxa, Stratus, WIN-911, Kepware, SyTech, Capstone, FacilityConneX, Bayshore Networks, and Tempered Networks.

Ranbir Saini
Automation Business Leader, GE Digital

Ranbir Saini is the business leader for Automation Software at GE Digital. He has 15+ years of experience delivering industrial automation, operations management, and media content-creation software to OEM, municipal, and enterprise customers. Ranbir has a passion for designing compelling and innovative solutions in the physical and digital space that make a meaningful difference to customers, human experiences, and society.

Paul Heney (Moderator)
VP, Editorial Director. Design World

Paul J. Heney, the VP, Editorial Director for Design World magazine, has a BS in Engineering Science & Mechanics and minors in Technical Communications and Biomedical Engineering from Georgia Tech. He has written about fluid power, aerospace, robotics, medical, green engineering, and general manufacturing topics for nearly 25 years. He has won numerous regional and national awards for his writing from the American Society of Business Publication Editors.

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