CURTISS-WRIGHT

# Digital Safety Systems Day

*Sponsored by Curtiss-Wright*

*"Everyone came to learn about all the new capabilities that are available. Curtiss-Wright did an excellent job. The event was well planned, the food was amazing, and the resort was absolutely gorgeous."*

*— Digital I&C Safety System Manager*

As nuclear power plants proceed with plant life extension initiatives and uprates, the modernization of instrumentation and control (I&C) systems has become an important part of transforming plant operations. Curtiss-Wright's **Digital Safety Systems Day** is the premier forum to learn about best practices in plant performance and optimization, gain knowledge about the latest digital controls, and participate in discussions that address each participant's unique needs.

Digital Safety Systems (DSS) Day was held as part of Curtiss-Wright's bi-annual Symposium at the Sheraton Sand Key Resort in Clearwater Beach, Florida. Symposium brings together technologists, clients, and users of Curtiss-Wright I&C solutions, DSS Day drew international participation from leading utilities, SMR manufacturers, engineering firms, and national laboratories. Subject matter experts were on hand to help attendees maximize their use of Curtiss-Wright's technology and tools. The primary objective was to share information among SMR developers and nuclear plant operators who are planning to replace or upgrade their digital safety systems.

# Digital Safety Systems Day

## A Multi-Faceted Agenda

The Curtiss-Wright Symposium included DSS Day as an addition to current plant performance and plant optimization tracks:

- Track A: Plant Process Computing, Digital Non-Safety Controls
- Track B: Plant Condition Monitoring
- Track C: Digital Safety Systems

As part of Symposium and DSS Day, Curtiss-Wright provided an update on Simulation Assisted Engineering (SAE) and the use of simulation software technology to validate control systems by our Simulation Group, formerly WSC, Inc. a leading provider of state-of-the-art simulation technology, which Curtiss-Wright acquired in April, 2024.

## Attendee Profile – Digital I&C Safety System Manager

*"The technical content was good and the size of the event was just right at about 60 people."*

One attendee – a Digital I&C Safety System Manager at a large, U.S.-based nuclear power company – said she came to investigate the RadICS system as part of her company's modular reactor design initiative. She was particularly interested in connecting with digital safety system suppliers, from Ukraine and elsewhere, to understand how they could engage with her firm. "I have worked in the commercial nuclear industry for more than 20 years, with a focus on digital safety systems," she explained. "I also serve as the verification and validation manager. The networking aspects of the event were great and I learned a lot about what's happening in this part of the industry. It was nice to interface with the RadICS team and learn about the capabilities of their platform."

She especially enjoyed discussions about the modernization and digitalization of nuclear power systems, both safety and non-safety related. She also appreciated the presentations about data analysis and predictive maintenance. "If you want to build a state-of-the-art nuclear plant, you absolutely need to invest in these areas," the Digital I&C Safety System Manager added. "Much of the material was pertinent to our situation. Curtiss-Wright had a lot of documentation and shared a lot of pertinent data points."

## State of the Art in Digital Safety Instrumentation and Control

RadICS forms the basis of Curtiss-Wright's NRC-approved digital safety system, a functionally and technologically diverse replacement for analog and digital safety-related systems at nuclear power plants throughout the United States. Standardized modules such as logic module, digital and analog input/ output (I/O) modules, each based on the use of FPGA chips as computational engines. The platform includes Field Programmable Gate Array (FPGA) components as computational engines. These devices are highly regarded for their ability to support both discrete and analog input/output (I/O) modules.

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### Attendee Profile – I&C Category Manager

*"The Symposium was well planned, and the location was very nice. I would attend a similar event in the future."*

Another attendee – a category manager in the I&C division at one of world's largest nuclear energy producers – said he came to network with colleagues and learn more about digital controls. He participated in the R*TIME® track, which included presentations from nuclear power plant operators, large scale utilities, and programmable logic controller (PLC) suppliers. He stated his company has used Curtiss-Wright's control rod drive mechanism, helium circulator fan/motor/drive, and radiation monitoring systems for several years and is now investigating new digital safety systems such as RadICS. The R*TIME track was relevant because it described how RadICS could be integrated with the plant's plant process computer system, which assists with both safety-related controls and non-safety related controls.


## Conclusion: See You Next Time!

*Based on the positive response from these and other participants, Curtiss-Wright plans to stage a similar Digital Safety Systems Day during the next Symposium. If you would like to join our mailing list so we can keep you apprised of upcoming events and activities, please send a message to PIMCSales@curtisswright.com.*

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