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Development of a Finite State Machine and a new LabView Interface for STAR[1] CHARLES COSTELLO, JIRO FUJITA, Creighton University, STAR COLLABORATION — The STAR (Solenoidal Tracker at RHIC) hardware controls system currently controls and monitors 60000 parameters. Although the system is has functioned for 13 years, it has been operated as 14 essentially independent subsystems with centralized error handling. A LabVIEW (Laboratory Virtual Instrument Engineering Workbench) interface and finite state machines (FSM) for two of these subsystems have been developed to overcome this situation. The EEMC (Endcap ElectroMagnetic Calorimeter) is one of these subdetectors at STAR. The EEMC is comprised of four different components that detector operators currently control and monitor separately. To integrate these subsystems, a finite state machine has been developed that would allow for centralized control and monitoring of the entire EEMC. A second subsystem, the BEMC (Barrel Electromagnetic Calorimeter) was developed using LabVIEW as a control system for testing. A new interface was developed that allows both control and monitoring of the BEMC in preparation for its inclusion in the FSM. The design and implementation of the system, as well as future plans, are discussed.

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