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Implementation of PC's in Control Systems for Large Physics Experiments<sup>1</sup> JENNIE BURNS, Creighton University — Traditionally large physics experiments have used dedicated specialized processors for their control systems. Increased processor speed has permitted the use of personal computers for the control and monitoring of these experiments. The control system for the STAR (Solenoidal Tracker At RHIC) experiment was implemented using VME-based front end processors for detector control and graphical work stations as the user interfaces. The system is being revised to accommodate new detector subsystems and to replace ten year old hardware with PC's which are less expensive and more easily maintained. The hardware control system for ALICE (A Large Ion Collider Experiment) is being developed in a PC-based environment. Personal computers are used for both front end functions and the user interface. The original STAR control system is compared with the upgraded system. The architecture and the implementation of the control system for the ALICE experiment are also presented. Comparisons between the STAR and ALICE systems are outlined.

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