

Abstract Submitted
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Synoptic Displays for HBESL and the Laser Lab System DIDIER MUVANDIMWE, Hendrix College, JINHAO RUAN, Fermi National Laboratory Laboratory — This project aimed to produce synoptic displays for two experiments: HBESL, the High Brightness Electron Source Laboratory and NML Laser experiment in order to assist the control of these facilities in the accelerator control network of Fermilab. Both displays were successfully produced and added on the ACNET (Accelerator Control Network) page. Synoptic is a system for graphical representation of real-time data in the accelerator control system of Fermilab. It creates diagrams representing a certain machine or process along with actual reading from the control system indicating its current state as well as supporting the ability to set data back from the control system. In this research, I learned how to use this software, and was able to use it in order to build these two synoptic displays for these two experiments: HBESL, and the laser lab. Both displays for HBESL and the laser experiment were successfully produced and added on the ACNET console under the NML page. Having these displays allow both users and scientists to be able to constantly control their experiments anywhere at any time. Being able to read out and set experimental parameters help users to protect the efficiency of experiments as well as avoiding extreme inaccuracy and inadequate conditions of experiments.

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