DSG-R&D Phoebus Meeting Minutes

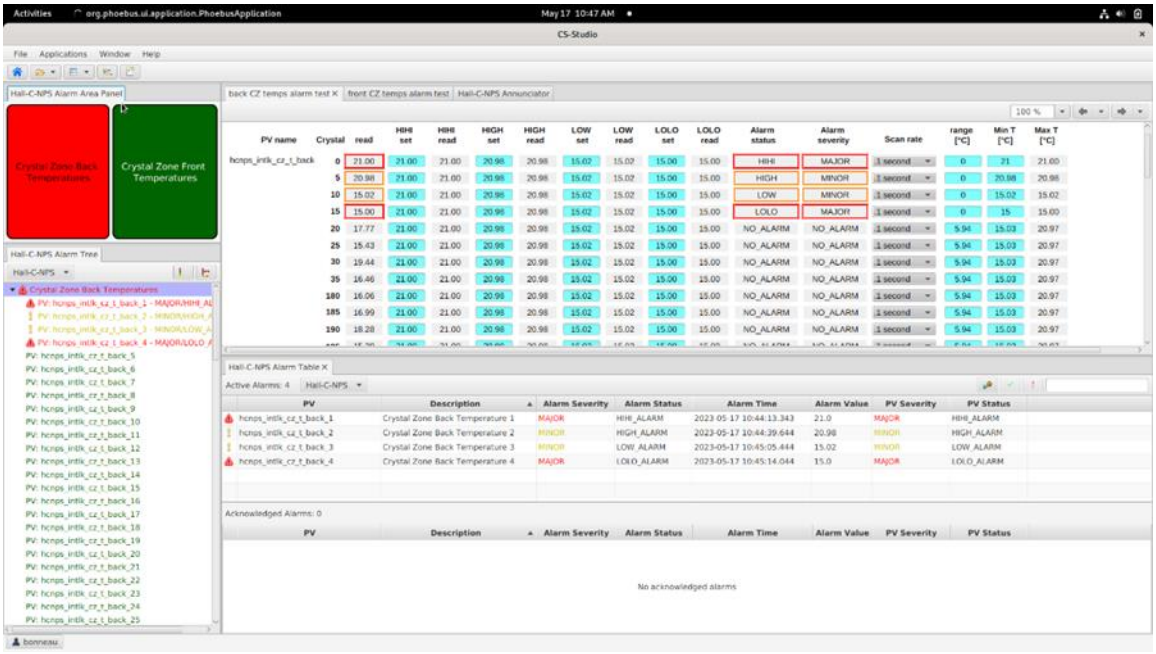
Date: May 26, 2023
Time: 02:00PM – 02:30PM

Attendees: Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, and Marc McMullen

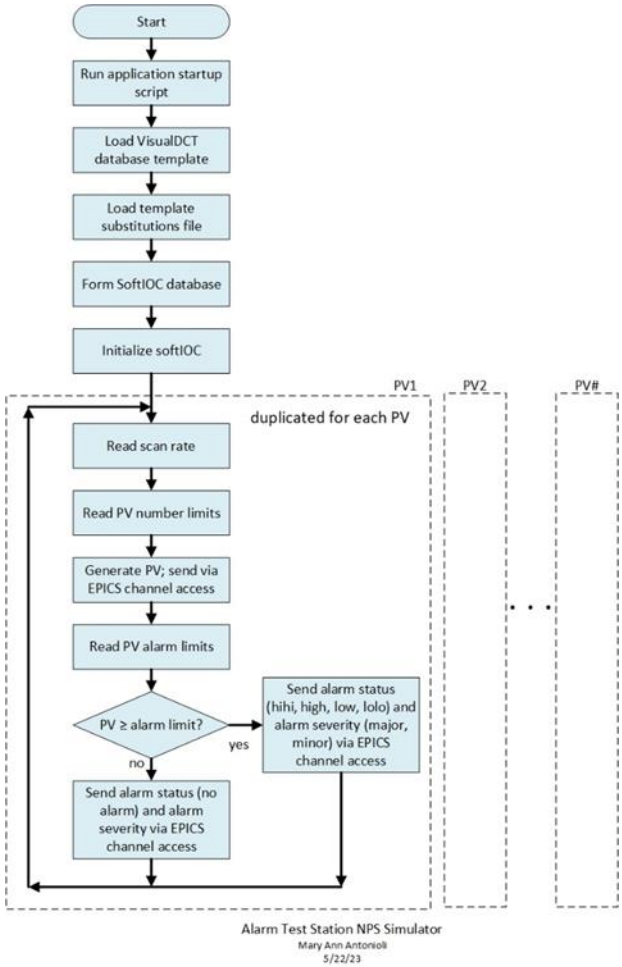
1. **Phoebus screen development for alarm system**
   Mary Ann Antonioli, Peter Bonneau, and Aaron Brown
   1. Discussed top menu and PV status screen
      - The menu lists and links to the seven alarm test system screens
      - Shows sums of interlock status and latched faults for
        - Front and back crystal zone thermocouple temperatures
        - Detector frame
        - Crystal zone cooling circuit
        - Electronics zone
        - Hall environmental
        - Chiller coolant
      - Shows the sum of alarm test system EPICS PV status and latched faults
      - New alarm test system status signals will be added to the PV list

2. **PV save and restore for applications using Phoebus**
   Peter Bonneau and Aaron Brown
   1. Saving and restoring PV values is needed for reboot of IOCs
   2. NPS hardware interlock system automatically restores trip thresholds upon reboot of cRIO
   3. Need save and restore for alarm test system and NPS EPICS alarm levels
   4. Discussed implementation of an interim solution for PV save and restore

3. **Alarm test system PV simulator**
   Peter Bonneau
   1. Discussed development of an alarm test system PV simulator
      - Simulator produces all NPS detector signal PVs
      - PVs are generated via softIOC server and sent to clients via EPICS channel access
      - PV values are defined by user and can be randomly generated or fixed
      - Simulator will be used to develop and test Phoebus applications, including the alarm system
      - Test of VisualDCT thermocouple template for alarm test system
        - Upon startup, the VisualDCT template and a text substitution file forms an EPICS database that generates simulated NPS thermocouple signals



Simulation of NPS Thermocouple EPICS Process Variables and Alarms



Alarm Test Station Signal Simulator Flowchart