DSG-R&D CS-Studio Phoebus Meeting Minutes

Date: March 15, 2024
Time: 2:00 PM – 3:00 PM

Attendees: Peter Bonneau, Pablo Campero, and Tyler Lemon

1. EIC DIRC Phoebus Alarm System Test Documentation and Applications

Peter Bonneau

1. Discussed the upcoming startup tests of the DIRC hardware and software with the Phoebus alarm system
    - A three-part, step-by-step procedure and layout applications have been developed for the test setup shown in Fig. 1. The layout applications automate the setup of the Phoebus user interfaces and alarm programs
    - Part 1: The Phoebus alarm system is independently tested via a laser signal simulator
        - Verifies the correct operation of the alarm system without the need of the cRIO and laser interlock enclosure
        - Phoebus software packages, the DIRC alarm programming, and the alarm user interface are all tested
    - Part 2: The cRIO hardware and software, EPICS softIOC, and signals from the DIRC laser interlock enclosure are tested as a subsystem
        - The EPICS PVs correctly generated by this subsystem are required *before* the Phoebus alarm system is started
    - Part 3: Complete system test with cRIO hardware and software, EPICS softIOC, and DIRC laser interlock system with the Phoebus alarm system
        - The configuration and setup for part 3 is the run procedure typically used for monitoring the DIRC laser interlock
    - Reference for applications and procedure: DSG Note 2024-03
    - Table 1 summarizes the components and software tested

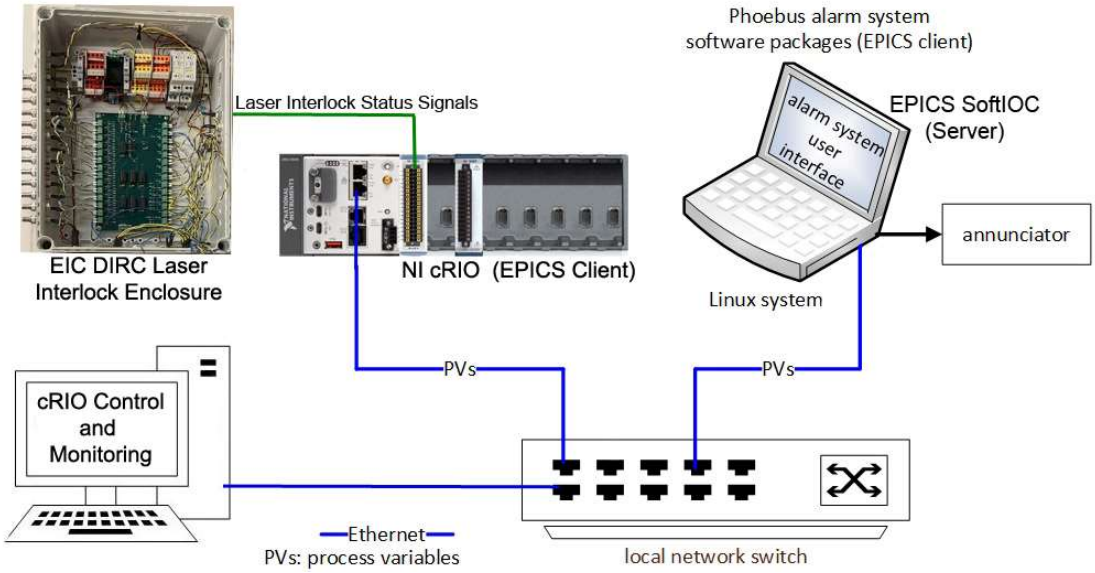

FIG. 1. Phoebus Alarm System Test Setup with EIC DIRC Laser Interlock

Start-up Procedure	Components & Software Tested	Layout Loaded
Part 1	Phoebus alarm software independently tested via laser signal simulator	*EIC-DIRC-ALARM-SIMULATOR*
Part 2	NI cRIO hardware and software, EPICS softIOC, and EIC DIRC laser interlock system	*EIC-DIRC-cRIO-TEST*
Part 3	Complete system test with NI cRIO hardware and software, EPICS softIOC, and EIC DIRC laser interlock system with the Phoebus alarm system	*EIC-DIRC-TEST-V1*

Table 1. Summary of Start-up Procedure

2. Discussed the Windows PC used for initial cRIO programming shown in Fig. 1. After the cRIO with EPICS client has been tested, the Phoebus softIOC client user interface on the Linux can be used instead of the Windows PC
   - The laptop runs Linux via an external SSD. The internal SSD has Jlab CUE Windows 10 installed that can be used for local cRIO monitoring or debugging (*without* the Linux-based Phoebus alarm system or EPICS softIOC)
3. Reviewed documentation for the DIRC Phoebus alarm test
   - Quick notes on getting started with Phoebus development laptop
   - Startup tests: DIRC Laser Interlock with Phoebus alarm system initial tests
   - DSG Notes

3. EIC DIRC Phoebus Alarm System Test - Hardware Configuration and Programming

Tyler Lemon and Mindy Leffel

1. Hardware assembly status
   - Completed assembly of cRIO chassis