

DSG-R&D CS-Studio Phoebus Meeting Minutes

Date: May 10, 2024

Time: 2:00 PM – 3:00 PM

Attendees: Peter Bonneau, Aaron Brown, Pablo Campero, and Tyler Lemon

1. Phoebus Test System Hardware

Mindy Leffel, Marc McMullen, Tyler Lemon, and Peter Bonneau

1. Cable assemblies status
 - Mindy completed three 37-pin, D-connector-to-wire-ferrule assemblies
 - Received PCBs and SHT35 sensors for the cRIO, BNC, NI-9402 cable assemblies
 - Peter will make diagram of cable assembly; needs old cable to ohm out
 - Mindy is getting components to fabricate three 25-pin D and three 37-pin D, jumper cables for terminal blocks
2. cRIO chassis status
 - Tyler gave Mindy four cRIO modules for installation in the Phoebus chassis: NI-9485 (relay), NI-9263 (AO), NI-9216 (RTD), and NI-9402 (DIO)
 - Marc provided an external power supply for the chassis; IEC power cord is on order
 - The delivery date for the remaining three cRIO modules is Aug 6th
 - Mindy has NI-9207 (AI), NI-9215 (differential isolated input ADC), NI-9401 (DIO TTL), and NI-9402 (DIO LVTTTL) cRIO modules for installation
3. Humidity Temperature Sensor Boards (HTSBs) status
 - Marc received the RTDs, humidity sensors, and HTSB V2 PCBs; gave to Mindy to assemble 10, though enough parts to assemble 15
 - Mindy soldered temperature RTDs and humidity sensors
 - Mindy made 40 approximately four-ft. cables. One end is soldered to PCB. Other end has the outer insulation striped back ~20" and each conductor terminated with a crimped ferrule. Mindy labeled humidity sensor output signal conductors
 - Mindy is testing the cable continuity and RTD resistance
 - Six of 10 HTSBs have cables soldered to PCB
4. RICH2 Hardware Interlock System chassis status
 - Tyler gathered parts to fabricate a duplicate RICH2 interlock chassis
 - Tyler ordered terminal block components
 - Tyler modified DIN rail clip design and 3D-printed a rail bracket for the DC-DC power converter
 - Mindy will assemble the backplane PCB
 - Sixteen SHT35 assembled sensor boards are available
 - Tyler will order flat network cables for connecting the sensor PCBs to the chassis
 - Tyler has a 4-slot expansion chassis cRIO and an sbRIO NI-9629 for the interlock chassis
 - Three NI-9219 modules will be needed for the cRIO expansion chassis
5. EIC DIRC Laser Interlock System
 - Mindy will assemble PCB
 - Peter will use the cRIO relay module NI-9485 to control switch inputs to the PCB
 - Mindy can make cable assemblies with ferrules. Peter to make a list.

2. Phoebus Test System - System Design Update

Peter Bonneau

1. The first sensors to be implemented are the HTSBs
2. Peter gave an update on the Phoebus Test System development
3. Peter updated the talk given on Tuesday based on feedback and new information

3. Phoebus Test System Software

Peter Bonneau

1. Peter discussed development software for the new system build
2. Group discussed possible system implementation using EPICS versions 3.14 and 7.08