DSG-NPS R&D Meeting Minutes

Date: February 14, 2023
Time: 02:00PM – 02:15PM

Attendees: Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, George Jacobs, Tyler Lemon, and Marc McMullen

1. Thermal readback

Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Pablo Campero, and Tyler Lemon

1. LabVIEW 2020 wasn't set up properly on the development computer; unable to add real-time modules to project
    - Attempted to add NI-9485 solid state relay module to project to control remote power controllers (RPCs) for chillers
    - Able to access module from different computer with LabVIEW 2022, but not the development computer, which uses LabVIEW 2020
    - Downloading LabVIEW 2022 to development computer to try to resolve issue

2. Hardware

Aaron Brown and Marc McMullen

1. Started setting up the RPCs for the chillers
2. Attempting to view voltage of K-type thermocouples to test if 60-ft extension cables attenuates the voltage signal (40 µV for every 1°C) from the thermocouples
    - Will make new project or VI and attempt to read just the DC voltage with and without the extension cables

3. High voltage controls

Aaron Brown

1. Debugging high voltage settings Python program
    - Some channels return a Channel Access warning when the command to set a parameter is sent, even if the channel is set to the new value
    - Implemented a wait time of 0.25 s after each command; did not resolve problem
    - Trying to force the set command by repeatedly checking the set value against the input value and resending the set command
        – Will check Pyepics documentation to see if there is another way to access PVs that may be more reliable

```
CA.Client.Exception.....................................................
    Warning: "Channel write request failed"
    Context: "op=1, channel=hchv20:00:008:V0Set, type=DBR_DOUBLE, count=1, ctx="hchv20:00:008:V0Set""
    Source File: c:\jenkins\win64-2\workspace\epics-base-3.15-win64\src\ca\client\oldchannelnotify.cpp line 160
    Current Time: Tue Feb 14 2023 11:55:00.596785414
.....................................................................
The set voltage for hchv20:00:008:V0Set is 6.0
```

```
The set voltage for hchv20:00:014:V0Set is 5.0

False
K = 0 for hchv20:00:014:V0Set
K NOW = 0 for hchv20:00:014:V0Set
K NOW = 1 for hchv20:00:014:V0Set
K NOW = 2 for hchv20:00:014:V0Set
K NOW = 3 for hchv20:00:014:V0Set
K NOW = 4 for hchv20:00:014:V0Set
K NOW = 5 for hchv20:00:014:V0Set
False
```