Setup

- ► MCC E-TC: Ethernet DAQ device for thermocouple
- ► Thermocouple (TC)
  - ▷ Product ID: Unknown. Type T??
  - ▷ E-TC is not connected to TC yet, but shows a reading. OK for readout test

- ▷ To be used at the target cave in the commissioning
- ▷ Could be replaced frequently when broken by radiation

- ► Remote access system:
  E-TC – Home LAN – Win PC – LabVIEW

VI Code

► The maker software has to be installed
  ▷ InstaCal = Configuration and communication of E-TC via Ethernet
  ▷ ULx = LabVIEW library for E-TC and others
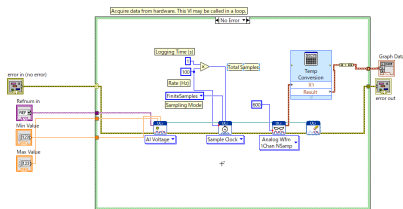
► The module created by Josh should be for MCC E-TC:

https://github.com/UVA-LabVIEW-Projects/LabVIEW-Projects/tree/main/Delcaor%20(Complete)

  ▷ Based on CML DQMH
  ▷ Did not run properly as is ... details in *next page*
    ▷▷ The input type was changed from "Voltage" to "Temperature"
    ▷▷ The timestamp was not correct
    ▷▷ The readout rate cannot be set ... not solved yet
  ▷ Due to version differences??
    ▷▷ ULx version: 2.25.0.0 vs 2.10.0.0
    ▷▷ LabVIEW version: 2020 vs 2018(?)

► Helpful if each module includes
  ▷ README.md about requirements of external software, version, etc.
  ▷ Document (on Confluence?) of test result
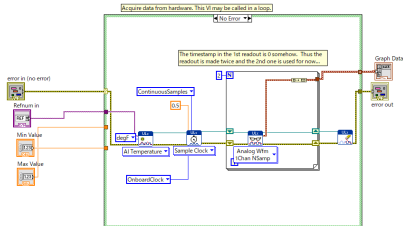
- ▶ Change in input device type
  - ▷ `Modules/Acquisition/HW calls/Acquire.vi`
    - ▷▷ Original
    - ▷▷ Modified

  - ▷ Interface VIs were modified accordingly
    - ▷▷ `SettingsEditor.lvlib/PublicAPI/Settings--cluster.ctl`
    - ▷▷ `SettingsEditor.lvlib/Main.vi`
    - ▷▷ `Testers/TestSettingsEditorAPI.vi`
- ▶ Readout timestamp
  - ▷ Included in the "waveform" data
  - ▷ Is "0" (=1970-01-01) when read out first
- ▶ Readout rate
  - ▷ Set to 0.5 Hz in `Acquire.vi`
  - ▷ Not effective

Test Result

▶ **Using the tester VI;** `Test Acquisition API.vi`

Questions

▶ Which is meant by the "Delacor framework" that we are mentioning?
  ▷ "DQMH" = Delacor Queued Message Handler
    ▷▷ Our template in `4David.zip` is based on this
    ▷▷ I tried this last week
  ▷ "CML DQMH" = Continuous Measurement and Logging DQMH
    ▷▷ The module created by Josh for MCC E-TC is based on this:
      https://github.com/UVA-LabVIEW-Projects/LabVIEW-Projects/tree/main/Delcaor%20(Complete)
  ▷ CML DQMH seems more suitable for our uses
  ▷ We had better definitize the "framework" that we use before developing each module
▶ How strictly do we manage the software versions?
  ▷ LabVIEW 2020 on my home computer
    ▷▷ Because it was the only version available for the "Evaluation" edition (i.e. before I activated the UVA license)
  ▷ Is everyone using LabVIEW 2018 or saving each VI file for version 2018?