

MicroBooNE DAQ

- Have met June-1,15, Wed, 2011, 11 am CDT. First two of our now regular, fortnightly DAQ meetings. Focusing on architecting and actually building readout/monitoring/controlling code.
- “DAQ” here meaning, PCIe cards on the SEB nodes and downstream:
- EPICS slow control monitoring. 2-prong effort: (1) EPICS-controlled HV PMT Test Stand down at PAB. (2) Instance running on Glenn’s KSU node, (soon also on the new uboondaq01 at LCC108 test stand).
- SEB node now at LCC, Rm 108. PCIe card from Nevis is in.

uboonedaq project on redmine

- Mainly for holding git code repository.
- I have added lots of people to Developers list. Go login to redmine, then tell me/Glenn if you too want to have access.
- Currently an “EPICS” top level directory and a “code” directory for the DAQ proper.

uboondaq01.fnal.gov up in LCC108

- Thanks, Gennadiy, et al.
- Georgia, et al., inserted the NEVIS PCIe card into it, installed the jungo driver, and she ran fake data (pressed her palms to her keyboard, it appeared, lotsa FAF3FAF3...) into and out of it! See docdb-1525.
- Glenn git clone'd code onto his SL5 machine and got it to build and run the fake DAQ exercise I've shown running on my Mac (still with the old, uncompressed fixed-size mBooNE data format). He even did it across 2 such machines; hence, the fake network no longer fake, as when I did it. See docdb-1524.

EPICS (slow control/monitoring): LCC

- The sharedMemory chunk on uboonedaqevb (nee' uBDPC) is going to be queried by EPICS IOCs for information about the uboondaq01-10 themselves.
- Glenn showed some nice work (also docdb-1524) describing his initial tests. He ran an EPICS IOC to do just as described in above bullet. Also ran an EPICS tool to get a desired channel's info (the Event Number) and print it to a terminal.
- We got some invaluable-seeming advice from Geoff Savage and JimK/Ron about EPICS tools to use for archiving, monitoring, alarming to narrow Glenn's research into this.

EPICS (slow control/monitoring): PAB

- A Decision was made to stay with VxWorks on the monoboard computer to control the PMTs. Geoff Savage is unconcerned about VxWorks support going fwd. This is our only such crate of HV to be controlled like this.
- The PAB MVME monoboard computer gets its kernel and boots on power up. Does this over rsh from another node on the test stand. Geoff Savage will this week begin to copy over and exercise some IOCs and the D0-like GUI, and then Teppei, et al, will use this to control their HV.

Real work now being done!

- Developers using uboonedaq01 and the wiki and codebase at <https://cdcvs.fnal.gov/redmine/projects/uboonedaq>.
- PCIe card installed at LCC108 test stand, and the jungo driver via the GUI communicates with it.
- EPICs in an early form runs on the LCC108 test stand.
- I'm urging that in addition to putting DAQ code-related documents/presentations on the docdb, that we also put them on the above project site.

Next

- DAQ proper: Carve out job responsibilities with Jim K and his 9th floor team and NEVIS, me, Andrzej+.... This is code to run on the SEB nodes mainly (uboondaq01-10.fnal.gov), but also on the uboonedaqevb. Would be nice to get a salvaged uboonedaqevb soon.
- EPICS: Ron R on 29-June will tell us all about NOvA's use of EPICS. We will discuss an initial code plan for the SEBs too.