CPE Software & Operations Downtime Collaborations

August 18, 2006

- Finish the EPICS GPIB support
  Importance: High; Level of Effort(LOE): Medium; Suspects: GPIB literati

  Identify devices which are no longer used or defunct and remove them from SCP panels; verify correct operation of all GPIB via EPICS; get TRACE_GET working for all required devices; identify all still necessary CAMAC GPIB support – move these devices to LAN boxes and fit them into the new scheme or remove them.

- Add the two new RF stations
  Importance: High; LOE: Medium; Suspects: Matt +

  Clone the EPICS setups; work with engineers during installation and commissioning; verify correct setup.

- Provide EPICS-side support for the IGP board
  Importance: High; LOE: High; Suspects: Matt, Lazmo, RonC

  Initial project is the Bunch Current Monitor replacement; FPGA programming is being done by Alan Fisher and Jeff Olsen; EPICS side involves a restructuring of the bunch current monitor and BIC software. Later project is to do the same for the luminosity EPICS support.

- EDM conversion and checkout
  Importance: Medium; LOE: low; Suspects: Anyone interested

  BIC suite is now converted; Judy will do an auto-conversion of the RF displays; Verify correct operation; correct problems; Convert remaining CUDS to EDM; modify CUD control to use EDM

- Knob box support move to microIOC from DOS
  Importance: Medium; LOE: High; Suspects: Jingchen,Hanif?

  Design and implement microIOC EPICS solution to replace current very old DOS boxes; implement current setup with minimal change to VMS side; add direct EPICS control of knobs; add EPICS-based diagnostics.

- Transfer BIC knowledge
  Importance: Medium; LOE: Medium; Suspects: Judy,Matt

Using RonC as a resource, develop an understanding of the BIC software; get to know the simulator support; clean up current inconsistencies; create more useful displays.

- Convert RF, BIC, and Luminosity EPICS support to EPICS version 3.13.10
  Importance: Medium; LOE: Medium; Suspects: Lazmo, Matt

  This is to fix a long standing problem where status is occasionally lost for some process variables. Build version 3.13.10; create parallel 3.13.10 support for the three applications; test and verify.

- Update RF Power Balance soft IOC
  Importance: High; LOE: low; Suspects: Matt +

  Incorporate the two new stations.

- Move DRRF support from VXI to VME
  Importance: Low; LOE: low; Suspects: Judy, Matt +

  Replace DRRF VXI crate with VME crate; Install MV167 processor; Application is already built for MV167; verify correct performance. Also, verify correct signal mapping for a few signals with Area Manager.

- Replace Flip Coil DOS support with EPICS solution
  Importance: Low; LOE: Medium; Suspects: Jingchen, Matt

  My first plans for this were declared naïve. Mike Brown has information on the complications. My idea: use small Coldfire computer with 16-bit ADC and RTEMS and EPICS; develop in parallel with existing application for verification; LCLS has such a chip; I can also get hardware from DESY.

- Support Brian Bennet and Kasey Traeger in LCLS BCS project
  Importance: High; LOE: Low; Suspects: Judy,Matt +

  Kasey and Brian need help setting up a VME crate with slow ADC and digital I/O; also setting up EPICS databases and getting EDM displays in place.