Pixel Online Software Lessons from CRUZET 3

Souvik Das
Cornell University

C ontents:

PixelFunctionManager and new Power-up Procedure

PixelTKFECSupervisor Indefinite Wait

TB Disks, Chainsaw and PixelFEDSupervisor issues

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Pixel Function Manager and New Power Up Procedure

- With the POS-DCS Integrated Power-up Procedure, we wait in the Configuring state for power supplies to turn on or ramp up if they haven't already. The PixelFunctionManager used to proceed to the Configured state while the PixelSupervisor was in Configuring! The central Run Control would occasionally issue a Start command which we would try to act upon from the Configuring state.

Solution:

- Using the xdaq2rc package, PixelSupervisor now tells PixelFunctionManager when it has finally entered its Configured state. Meanwhile PixelFunctionManager rests in its Configuring state.

- The Configuration.xml file needs to be modified to include the xdaq2rc package and the RCMS listener.

Comment:

- The POS-DCS Integrated Power-up Procedure worked: Did stall the PixelTKFEC & FECSupervisors if power wasn't on, and did ramp up the Vdigi from 2.1 V to 2.6 V

Indefinite Waits in PixelTKFECSupervisor

- PixelTKFECSupervisor often refused to Halt or Stop from a Physics Run.

- Problem traced to indefinite waits in the DCU reading workloop because of a missing tag in the Configuration.xml file.

Solution:

- The member data specifying the waiting in the DCU reading workloop is now initialized to a default value in the constructor. Fixed by Andriy and committed to CVS.

TB Disks, Chainsaw, PixelFEDSupervisor

- The terabyte disks were used to store configuration files (/PixelConfig), run data (/PixelData0) and log files (/PixelLog0). However, they are inaccessible from a non-VME PC. Hence, a shifter with no account on the VME PCs can't see them.

- Chainsaw opens two tabs for the logs. This seems to be because cmsrc-pixel.cms is a name aliased to the actual computer name. The two tabs often don't have the same log files.

- PixelFEDSupervisor occasionally died in the middle of a Physics Run and unpredictably when starting, stopping or halting a run. Anders and Will are looking into this.