News about DAQ2

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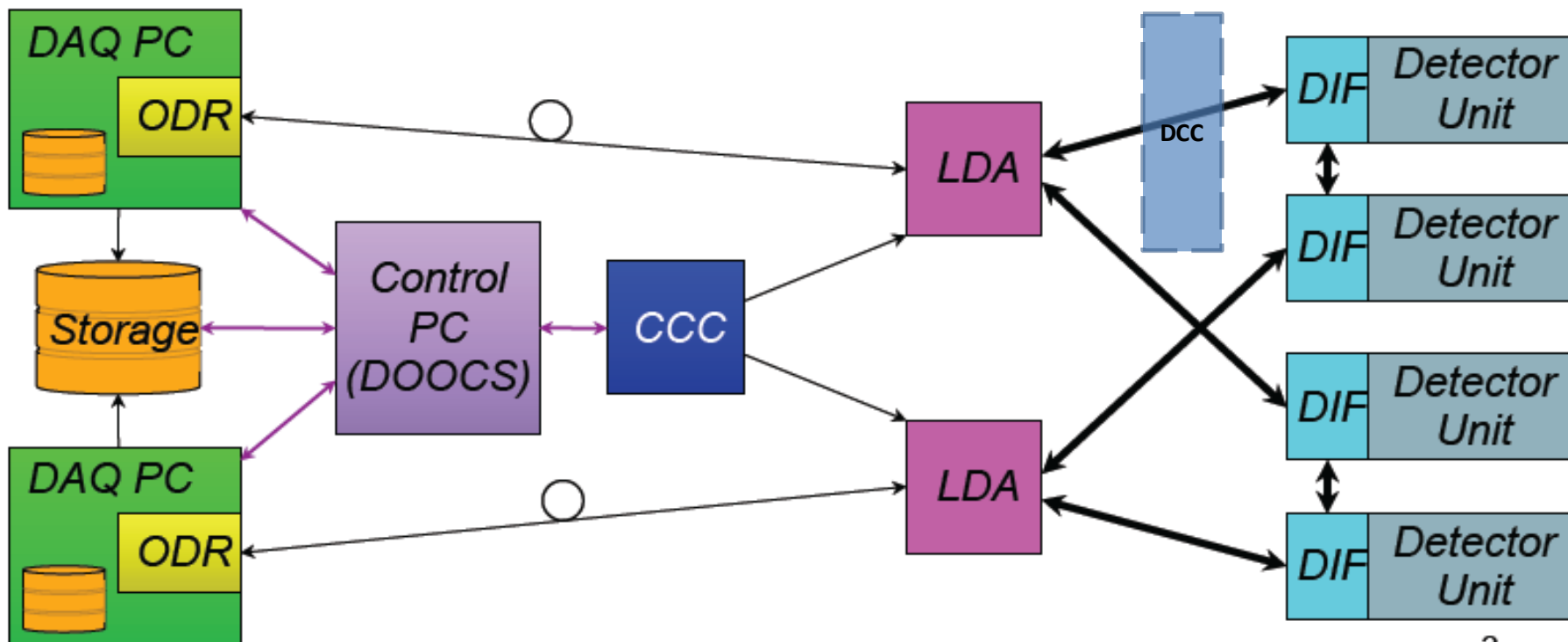
What's new ?

The DAQ2 system has been successfully used during Si-W ECAL test beam (March & July, see ECAL session)

Reasonably sized setup : 1 PC+1 LDA+6 DIFs, 1500 channels, 150 events/s, synchronization with CCC if several PCs are used
Note : using 6 DCCs, the number of DIFs can be 54 (~13k ch. of Si-W Ecal or 17 layers of SDHCAL)

How ?

No changes since July'11 SDHCAL test beam except

- new software (see F. Magniette's talk),
- changes in DIF firmware (ROC chips interface, see my talk during last calice week)

Good stability : no crashes seen over several weeks (3 weeks calib. Run during vacations without human supervisory)

Low noise induced by the DAQ2 system

- Si-W ECAL noise is ~1000 e- rms (S/N~20)

Know issues

Some remaining weaknesses

- Cabling and mechanics (to hold cables)
- Buffer overflow (missing data, rare)
- Software components to be improved
  - Packet capture (some losses, neglectable @10Hz spills)
  - Framework Integration (XDAQ…)
  - Multi-LDA (on the same PC)

Next steps

- ## Hardware
  - Forthcoming **GDCC** as a LDA replacement (see F. Gastaldi's talk)
  - New **CCC** from Mainz group : prototype module already tested (SI-W Ecal TB)

- ## Firmware
  - Improvement of the serial link (formerly designed by M.K. @Manchester) : flow control feedback
  - Extra features (to be discussed/suggested)

- ## Software
  - Big effort
  - See F. Magniette's talk

Questions ?