ATCA control S/W in LHCb

Goal

- Integrate ATCA control in the CERN standard SCADA software – PVSS/WinCC
  - Control shelves and blades
    - Switch On/Off, reboot
  - Monitor parameters
    - Temperatures, voltages, fans, …

Options

- IPMI Manager for PVSS
  - Doesn't seem to exist
- OpenHPI
  - OpenHPI client for PVSS
    - Doesn't seem to exist
  - SNMP
- Dedicated server
  - Use one of the available IPMI tools to communicate with the HW
  - Use DIM* to serve PVSS
    - DIM client readily available for PVSS

*Distributed Information Management System:
Provides a network transparent inter-process communication layer for distributed/mixed enviroments

IPMI software

- Many options available
  - IPMItool
    - No library but is open source
  - OpenIPMI
    - Library available for Linux
  - Ipmiutil
    - Library available for Linux and Windows
  - …

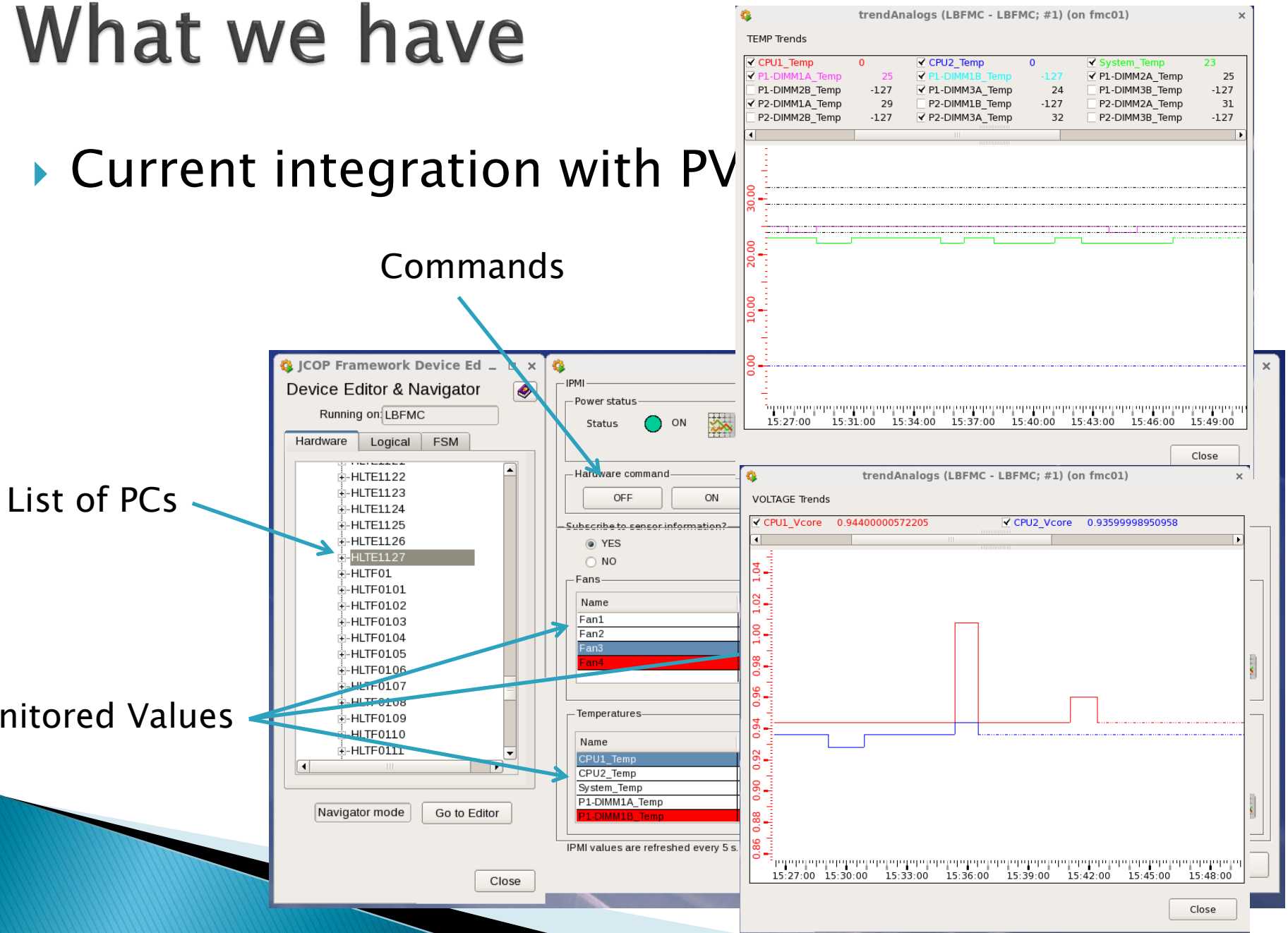
Currently the one that seems to have better support for PICMG control is IPMItool

What we have

- IpmiSrv
  - From the LHCb Farm Monitoring and Control (FMC) tools
  - Uses DIM
  - Works as is to control crate power
    - But not much else…
  - Can be extended
  - Uses ipmitool command line calls and parses the replies
- A new IPMI server
  - Uses DIM
  - Uses direct ipmitool RMCP calls
  - Very early stages of development
    - Working test version with limited functionality

What we have

- Current integration with PV



Next steps

- An ATCA crate was bought to continue the tests
  - Should be arriving soon
- More active development of the Server software