



Contribution ID: 160

Type: Poster (Session A)

The CMS Tracker Control System & Tracker Safety System

Tracker Safety System TSS and Tracker Control System TCS is a two pillar system, where TSS ensures independently the safety with a large PLC (Programmable Logical Controller) system, while TCS controls 2000 power supplies for silicon module low and high voltage power and 100 low voltage control power supplies. Detector interdependencies of control, low and high voltages are handled, as well as fast ramp downs in case of higher than allowed temperatures or currents in the detector, experimental cavern problems, etc. All this is ensured by evaluating 10 4 power supply parameters, 103 information from Tracker Safety System via the Siemens S7 driver and 10 5 information from the DCUs situated on all front hybrids and control units CCUs, transmitted via SOAP from DAQ. The software system is realized in a hierarchical structure starting on the top nodes with TRACKER, sub detectors passing commands downwards to nodes like Sector, Cooling Loop, Control Group and finally Power Groups, error states are reported upwards. The heart of the TCS is composed out of an industrial SCADA program (Supervisory Control And Data Acquisition) PVSS (Prozess-visualisierungs- und Steuerungssystem from ETM Austria) together with a Finite State Machine written in SMI++, a derivate of the former DELPHI control software; thus using the standard control software framework for all LHC experiments.

Author: HARTMANN, Frank (Institut fuer Experimentelle Kernphysik)

Presenter: HARTMANN, Frank (Institut fuer Experimentelle Kernphysik)