Minutes of the Compass DCS meeting
05/02/03

Participants: P. Bordalo (LIP), V. Falaleev (CERN), J. Hannappel (Bonn/Erlangen) F.-H. Heinsius (Freiburg), B. Ketzer (Munchen), Y. Khokhlov (Protvino), A. Magnon (Saclay), D. Panzieri (Torino), C. Quintans (LIP), S. Ramos (LIP), S. Dalla Torre (Trieste)

Agenda:

1. Communications — Paula Bordalo
2. COMPASS DCS - Present Situation — Valeri Falaleev, 10 min
3. Foreseen tasks
   - (a) General list (draft) — Catarina Quintans, 20 min
   - (b) The DCS Reliability Program — Valeri Falaleev, 10 min
   - (c) Archiving of historical data
     - - introduction — Valeri Falaleev
     - - discussion — all
4. Requests for additional monitorings — all

Summary:

Paula explains that for the next run, before we start working on the requests by the detector groups, it is mandatory to upgrade the versions of the programs we are using in the DCS, and also the operating systems on the main DCS computers, since all these are very old and in most cases not supported any more by CERN IT.

Valeri presents the situation we had at the end of 2002 run. He focuses on several problems like unexpected power cuts, corruption of archives, slow performance of the system and non or almost non-documented improvements that were done during the run.

Concerning the foreseen tasks before the 2003 run, Catarina explains the upgrades that are being carried on, namely upgrading from Windows NT to Windows 2000 on the PCs running Windows OS, and from RedHat 6.1 to RedHat 7.2 on the ones running Linux; upgrading the PVSS version from 2.11.1 to 2.12 and the Framework to version 1.2. Also new DIM API managers and SLiC versions will be installed for the VME based communications. After this is done and fully tested in "data acquisition mode" (crates, etc on) we have to prepare and implement a reliability program to guarantee adequate response to possible accidents. The security of the system and the procedure for archiving the data are also priorities. Concerning the new developments Catarina explains that priority will be given to the requests already arrived and well documented. The integration of the remaining detectors into the system will be done after. For those detectors that have their own independent monitoring system, the priority will be to integrate alarms coming from these into the general DCS. Also an effort will be done to document all the improvements made to the system and to write a DCS shifters manual.

The proposal for a DCS reliability program is presented by Valeri. The two main DCS computers will be protected against unexpected power cuts by UPS's to be installed in the near future. For the next run, both computers will have hot spares that can be used in case of computer crash. The mirroring process between twin computers has to be studied further. The proposal to mirror every 24 hours seems not enough, according to some detector experts. But the mirroring process takes about 10 minutes, and while copying the entire system will be unavailable for other operations. H. Fischer expresses his concern that 10 minutes without being able to monitor the data and intervene is too long.

In addition to the mirroring between main computers and hot spares, the linux computers will be put in the CERN ADSM system for automatic backup. The historical archives of past data will be available from CASTOR. The format to export these data has still to be studied.

There is general opinion in the collaboration that the way to access the archived data has to be simplified and explained to the users. The archived parameters have also to be reviewed. A. Magnon explains that the monitored current profiles are very important for several detectors and should be archived – until now they were not, although the system is prepared for it.

There is a consensus that the slowness of the system is one of the main items to be improved. A. Magnon requests again reading of monitored values during the spill, something also important for other detectors. Paula explains that this requires surveys with 1 second cycle, instead of the 15 seconds we had last run. We are already working on that, namely by trying to split SLiC into 2 surveys. B. Ketzer criticizes the use of SLiC in our DCS system, that he considers as the bottleneck responsible for slowness. He proposes to get rid of SLiC and connect directly PVSS with DIM. Paula answers that this is complex and would take much more time to implement. We are considering this solution as an alternative for run 2004.

Paula explains that every request for new developments has to be well documented, namely containing the reference of equipment to control (crates, power supplies, boards, number and name of channels, parameters to be monitored, together with dead bands for each measurement. In the future a template of such users requirements will be available from the Web.