

**LHC EXPERIMENT-ACCELERATOR DATA EXCHANGE WORKING GROUP
(LEADE)**

Minutes of the 36th Meeting held on March 26, 2007

1. STATUS REPORT ON THE IMPLEMENTATION OF DATA EXCHANGE SYSTEMS (D. SWOBODA)

Detlef Swoboda reported on the recent achievements in implementing the data exchange systems, pointing out some remaining action items such as cable lengths and safe power supplies.

For the distribution of the GMT signal a receiver card, which receives the time stamp, the safe-beam parameters and the beam-mode signal and costing about CHF 1000.--, is proposed to the experiments. AB/CO will provide maintenance by providing the necessary drivers. David Evans suggested a special discussion dedicated to the maintenance phase.

Each experiment has to identify what hardware is missing for the data exchange systems, and then an agreement with the suppliers needs to be found on the delivery times. CIBUs are scheduled to be delivered to the experiments as of now.

At the end of the presentation, a discussion arose on the reliability of the various Beam Conditions Monitor systems the experiments plan to implement. This issue will be followed up in upcoming meetings of LEADE.

2. STATUS OF DATA EXCHANGE IMPLEMENTATION IN CMS (J. TROSKA)

In his presentation, Jan Troska outlined the status of the data-exchange implementation in CMS, concluding that the experiment is making significant progress in this area. The CMS CIBU will mainly be driven by the Beam Conditions Monitor system of the experiment. For future use, a CIBU system will be maintained for the CMS magnet control system.

Instead of an own CIBU, TOTEM will only have a dedicated Roman Pot motor control. The cables for this control are already installed.

For the BPTX, an oscilloscope-based readout scheme was adopted. Here, the cabling is also finished, although the termination still needs to be done.

Testing of these systems can begin as soon as sample data are available. An LHC contact person for DIP data availability and software handshaking for interlocks and machine mode changes is needed.

3. STATUS OF DATA EXCHANGE IMPLEMENTATION IN ALICE (D. EVANS)

David Evans gave a presentation of the status of the data exchange systems in ALICE. The status of DIP is well advanced, although some software still needs to be written. The experiment is also ready to receive TTC signals, while the fibres and the updated boards need to be delivered.

The BST will not be used by ALICE, and the same might apply also to GMT.

For the Beam Conditions Monitor, ALICE will adopt the LHCb system, which is under development.

Realisation of the interlocks (ZDC and dipole magnet hardware interlocks as well as the software interlocks) is progressing well.

For the BPTX, ALICE will most likely use the board Richard Jacobsson proposes for use in LHCb. For details, see the presentations given by Detlef Swoboda and Richard Jacobsson at this meeting.

4. STATUS OF DATA EXCHANGE IMPLEMENTATION IN LHCb (R. JACOBSSON)

Richard Jacobsson reported on the status of data exchange implementation in LHCb. There has been significant progress in all areas such as in the timing, fast control, clock and orbit reception, beam pickups and GMT. The RF2TTC kit (developed by Sophie Baron) is tested and validated.

For further commissioning, it would be necessary to have clock and timing signals. The experiment is also interested in the schedule of the BST tests ("emulation mode" would be enough), the delivery and test schedule for the GMT system control and the BIS reviews.

Provisional dates for the remaining meetings in 2007 (16:00 hrs):

May 7, room: 40-R-B10,
June 11, room: 40-4-C01,
July 23, room: 40-R-A10,
August 27, room: 40-S-A01
October 15, room: 40-R-A10,
November 26, room: 40-R-A10.

Ch. Ilgner