From: **Lorenzo Vitale** Lorenzo.Vitale@ts.infn.it
Subject: [det-rmba:6] Draft minutes of the RMBA meeting on May. 29th, 2020
Date: 29 May 2020 at 22:56
To: det-rmba@belle2.org

Dear WG members and colleagues,
this is a short draft of the meeting minutes prepared by LV.
Please don't hesitate to send me any comments and corrections.
The final version including the corrections will be uploaded to indico.

Short summary of the 1st remote RMBA working group meeting (May Fri. 29th, 2020)
https://indico.belle2.org/event/2287/
Participants:
LV, Hiro, Shuji, Guiliana, Carsten, Hendrik (from WG),
Livio, Yifan, Francesco, Katsuro, Carlos, Frank, Ivan, Paolo,
Bepo, Dario, Mattia, Benigno, Pietro, Luciano, William, Eva.

1. William Viganò and Eva Calvo Giraldo from CERN gave very clear and interesting presentations
on various aspects of the BLM system of the LHC injector complex. They described in particular
the measurement of currents from ionization chambers over 10 orders of magnitude,
with minimum integration time and response for interlocks of 2 microseconds.
After an overview, they gave several relevant details on the hardware and firmware implementations.

2. In the following Q&A the discussion was centered on some key features of the system, including for instance:
- the current measurement sensitivity at different time scales (from 2 us to about 1 s): <10% @2 us over the full range
- the availability of monitoring data and of post-mortem buffer memories readout while abort functionality always active
- the synchronisation methods for the different parts of the system
- the self-calibration, self-test, and redundancy features
aiming at controlling the reliability and failure rates of the many components of the system.

3. Ivan Popov (MPI Munich) presented very promising results on correlations
between VXD abort requests and signals available from the CLAWS detectors (scintillators+SiPM)
mounted close to the QCS magnets, showing that with a simple discrimination scheme
they should be able to provide abort requests to SuperKEKB and warning signals for PXD/VXD
with significant gain in time delay. Further tests are planned before submitting
an implementation proposal (short-term), in particular fake rate is still to be well studied.

4. In the following discussion on working group organisation, we decided to pursue in parallel:
- the analysis of electronics upgrade implementation options and of the required resources;
- the preparation of an internal note on the update of requirements for RMBA in the interaction region,
and on the requirements for the upgrade of diamond electronics;
(LL will prepare the overleaf infrastructure and a skeleton of a first draft aiming at the next B2GM).
The participation of experts from the SuperKEKB groups will be actively encouraged.

5. The group will meet on a bi-weekly base, every second Thursday, after the MDI meeting,
from 10 a.m. to 11 a.m. CEST — 17-18 p.m JST
The next meeting will be announced and prepared for
Thursday June 11th, 2020 at 10 a.m. CEST — 17 p.m. JST.

Cheers Lorenzo