

The role of Libera Brilliance+ in developing the new MicroTCA.4 BPM system for PETRA IV

Wednesday 7 December 2022 14:00 (15 minutes)

I-Tech and DESY are developing a BPM electronics prototype on MicroTCA.4 platform for Petra IV TDR. The new prototype is based on the Libera Brilliance+ BPM system (LB+), and relies on the knowledge, expertise and maturity level of the ~15 years' worth of LB+ development. While the LB+ is based on the MicroTCA.0 technology, it is not 100% MicroTCA.0 nor MicroTCA.4 compatible, mainly due to the still emerging MicroTCA.x standard details at the time of the LB+ conceptualization.

The impact of the LB+ heritage, both in terms of RF electronics, as well as the application and framework maturity on the porting to the new MicroTCA.4 based BPM prototype is discussed. The similarities and differences of both platforms are discussed as well. Regardless of the new external (in-tunnel) switching concept being used, it was exactly the LB+ maturity that minimized the required porting effort, and most importantly, minimized the risks and enabled the short time-to-prototype - a strategy that gave us the opportunity to deliver the prototype in due time.

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Session Classification: Session 5

Track Classification: New Products