Contribution ID: **36** Type: **not specified**

Single Cavity RF controls based on MTCA.4

Wednesday 12 December 2012 11:30 (15 minutes)

In the framework of the European XFEL project, hardware, firmware and software has been developed for high-precision RF controls. It is cost optimized for the processing of a large number of superconducting RF cavities operated at frequencies of 1.3GHz or 3.9GHz.
We present here cost and performance optimized MTCA.4 LLRF system architectures dedicated for single NRF/SRF cavity controls covering the frequency band from 500 MHz up to 6 GHz.
Supplementary MTCA.4 modules such as RTM piezo drivers, AMC frequency tuner motors, high-order cavity mode processing AMC and water control units complete the LLRF portfolio and provide a compact, reliable and user-friendly fully MTCA embedded LLRF system of moderate cost and outstanding performance.

Author: Dr HOFFMANN, Matthias (DESY)

Co-authors: SIKORA, Dominik (ISE / Warsaw University of Technology); DUHME, Hans-Thomas (DESY); RUTKOWSKI, Igor (ISE / Warsaw University of Technology); PIEKARSKI, Jan (ISE / Warsaw University of Technology); PRZYGODA, Konrad (DMCS / Technical University of Lodz); MEYER, Robert (DESY); BOU HABIB, Samer (ISE / Warsaw University of Technology)

Presenter: Dr HOFFMANN, Matthias (DESY)

Session Classification: MTCA Applications in research and industry

Track Classification: Session 4: MTCA applications in research and industry