

Cosylab - Accelerator division elevator pitch

Cosylab is the world leader for control system development and integration for large physics facilities, such as particle accelerators, synchrotron radiation beamlines and radio telescopes. We provide professional solutions from system engineering over custom software and hardware development up to building complete turnkey control systems. Our hardware products integrate diagnostics, controls and software into a single turn-key unit.

Our experts, who have first-hand experience and deep understanding of the needs of customers, both commercial and scientific, serve most major accelerator facilities in Europe, the USA, Japan and Australia. We are front runners in setting the standards in software technology and project management, enabling our clients to get the most in terms of system performance, quality, cost and meeting schedules.

Topics of the Workshop Presentation

- Brief introduction of the Cosylab / Accelerator division
 - system integration; from HW to CS
 - for the workshop we shall focus on the HW side
 - microIOC family and integration of COTS components
 - HW development: interfacing needs, avoiding low-level development
 - customization to specific needs (HW/SW functionality and connectors)
 - *if high level is also required, please provide feedback*
- microIOC HW family; idea and brief overview of products
 - microIOC products already used in 27 different accelerator facilities worldwide
- our role:
 - participate in GSI study
 - collaborate on timing developments with GSI
 - one option being to adopt CERN solution at GSI (i.e. interfacing timing modules to GSI Front End Controllers (FEC) (HW & SW support))
- other reasons for interest:
 - microIOC-DG - in-house developed simple delay generator, based on FPGA (under development)
 - helping our customer to integrate / upgrade their existing timing system or gather requirements for new system
 - National instrument alliance partner (also involved in timing systems)

Our primary interest is not to involve heavily in new development but rather integrate / interface already existing solutions. This is due two facts:

1. We recognize the amount effort put into low-level development
2. We rather strive to understand customers' requirements and tailor solutions already developed. We help our customers with study, integration and commissioning.

Our HW-side integration experiences:

- successful microIOC product line (www.microioc.com)
- FPGA/CPLD experiences (DG, M-Box)
- PCB design (example of PMAC I/F board and SCO modules)
- analogue high-voltage design (microIOC-LOCO)

Cosylab participants for the workshop:

Joze Dedic (Head of Hardware), Igor Verstovsek (Accelerator Division CEO)