



Contribution ID: 13

Type: **Oral presentation**

Management Software and Data Exchange Protocol for the INFN-LNS Accelerators Beamlines

Saturday, 23 September 2017 09:00 (25 minutes)

My presentation will describe the design and the development of an innovative management software for the accelerators beamlines at INFN-LNS. The Graphical User Interface, the data exchange protocol, the software functionality and the hardware will be illustrated.

Compared to traditional platforms for the accelerators console, at INFN-LNS we have developed a new concept of control system and data acquisition framework, based on a data structures server which so far has never been used for supervisory control.

We have chosen Redis as a highly scalable data store, shared by multiple and different processes. With such system it is possible to communicate cross-platform, cross-server or cross-application in a very simple way, using very lightweight libraries.

A complex and highly ergonomic Graphic User Interface allows to control all the parameters with a user-friendly interactive approach, ensuring high functionality so that the beam operator can visually work in a realistic environment.

All the information related to the beamline elements involved in the beam transport, can be stored in a centralized database, with suitable criteria to have a historical database.

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