Content:
We report some improvements and results of recent performance measurements of DAQ-Middleware. We also report on the current status of DAQ-Middleware for Material and Life Science Experimental Facility (MLF) at Japan Proton Accelerator Research Complex (J-PARC) and new efforts to develop testbed DAQ system using DAQ-Middleware. DAQ-Middleware is a software framework for a distributed data acquisition (DAQ) system. DAQ-Middleware is based on Robot Technology Middleware (RTM) developed by the National Institute of Advanced Industrial Science and Technology (AIST). The DAQ-Components in DAQ-Middleware are software modules that are fully independent of each other but may also be integrated by the user. Users can easily develop new DAQ-Components and they can select from different DAQ-Components, mixing and matching them to create their own DAQ system.

Triggered by the official release (version 1.0.0) of OpenRTM-aist in January 2010, an implementation of RTM, we made improvements in DAQ-Middleware and measured consequent performance increases such as data transfer speed between DAQ-Components.

In March 2009, four instruments employed DAQ-Middleware within their own DAQ sub-systems in the neutron experiment hall at MLF of J-PARC. As of April 2010, DAQ sub-system using DAQ-Middleware was in operation at eight instruments.

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Session classification: --not yet classified--
Track classification: Online Computing
Type: Oral Presentation