## **SOFT 2018**



Contribution ID: 1090

Type: not specified

## P3.043 Development of the KSTAR Alarm Management System

Wednesday, 19 September 2018 11:00 (2 hours)

The control systems for the Korea Superconducting Tokamak Advanced Research (KSTAR) have been implemented based on the Experimental Physics and Industrial Control System (EPICS) which is a framework for control systems widely used on accelerators and fusion devices including the ITER, an international fusion experiment.

In terms of operation and maintenance of KSTAR control systems, there was a need to have an alarm management philosophy for the KSTAR and to implement an alarm system compliant with the philosophy for comprehensive and systematic monitoring of device, efficient and timely operator's action against abnormal situation.

Therefore the KSTAR control team has developed a guideline for alarm management for the KSTAR, and implemented an alarm system following the guideline by using the EPICS based CS-Studio alarm functions. The KSTAR alarm management system has been deployed using the Docker which is a container based virtualization technology for ease of deployment and management and better performance in comparison with virtual machine.

This paper describes a summary of the KSTAR alarm management guideline and implementation of the KSTAR alarm management system.

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Session Classification: P3