Automated Computer-Based Procedure System for Remote Operation System

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Abstract

In this paper, we study the feasibility of Automated Computer-Based Procedure(ACBP) System for Remote Operation System of Nuclear Power Plant(NPP) as long-term research theme. And we present similar and related researches that are fulfilled at I&C laboratory in nuclear department of KAIST. Remote monitoring system using network of NPP is already designed and built in some NPP.. This research try to add remote operation function to that system, so operator can perform real-time monitoring and control NPP at distance place by using network and web browser without special instruments. But this system has some serious problem. Because it uses network, it cannot guarantee faultless in network accident status. Therefore this research suggests Automated Computer-Based Procedure System to support remote operation which offers solution for network problems. In case network was out of other in emergency situation, so operator cannot connect to NPP, ACBP operate NPP itself. There are 4 persons in Main Control Room(MCR) of NPP : Senior Reactor Operator(SRO), Reactor Operator(RO), Turbine Operator(TO) and Electrical Operator(EO). SRO receives signals of NPP and diagnoses current status of NPP and decides suitable actions for NPP by procedures. ACBP do roles of SRO in such situation.