

IMPLEMENTATION OF OPC-BASED COMMUNICATION BETWEEN TEMPERATURE PROCESS AND DCS ON LABVIEW PLATFORM

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ABSTRACT

Process automation market is one of the most dynamical industrial sectors. Typically the DCS used in complex process application where large amount of I/O data's are required, such as oil refineries and chemical plant. DCS are multitasking systems able to handle great common data base and complex algorithms. Using big mainframe computer to control a entire plant was attempted back in the early '60s but it soon became clear that hang-up, one bug or failures could cause the whole plant to shutdown. Distributed control system gives a safety margin for that problems. In the modern industrial automation, LabVIEW is probably the most comprehensive environment for setting up a control/data acquisition system (CS) for a scientific/laboratory experiment. The main intent of this paper is to highlight the salient features of the present DCS used in the process industry and about sharing the temperature process parameters with LabVIEW and Honeywell DCS interfacing through NI OPC server. The NI Communication Server is used to interface the LabVIEW with any third party devices and also can easily analysis the temperature process with LabVIEW.

KEYWORDS: LabVIEW, DCS, NI OPC SERVER, Temperature Process