

Thesis Title	Multi-process communication on single bus
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ABSTRACT

This thesis introduces the new design concept of process-control system in order to supersede old version of process-control system. New process-control system consists of transmitter-type control boards, final control-element control boards and workstations, which are linked by digital single bus. Transmitter-type control board functions to receive analog or digital signal from transmitter or contact. Final control-element control board functions to receive measuring signal from transmitter-type control board and set point from workstation then manipulate to get proper control signal for process. After that will send the signal to final control-element for process control. Personal computer shall be used as workstation to communicate between users and process equipment on the single bus network in order to determine and control the process.

The application program will operate on WINDOWS® platform which is user-friendly. In the future, it can be expanded to a networking system by using the characteristics of WINDOWS operating system. The other computers can access data easily. That is the idea of "Plant Information System".