Thesis Title	A Design and Construction of Parallel Data Transmission System for Control Measuring Equipments using IEEE-488 Standard Bus (GPIB)
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Abstract

The computer communication interface can be devided into two categories. The first one is serial communication such as RS 232C standard etc. and the other one is parallel communication such as IEEE-488 (GPIB) standard etc.. Nowaday almost communications between computers and industrial equipments such as digital multimeter, printer or oscilloscope etc. use IEEE-488 (GPIB) standard bus becuase of its versatility with high speed and capability of connection with many kind of equipments into a system. The communication between computer system controller, and measuring equipments which connect to IEEE-488 (GPIB) standard bus system, however, need the interface cards to operate the connection together. Despite availability of the commercial IEEE-488 controller cards nowaday, they still have high cost and the complete documentations are not available for developing a complete system. The primary objective of this research is to develop a interface card based on available processors such as uPD 7210 including the softwares control developed on WINDOWS operating system for using with a microcomputer as system controller. Some applications of our system such as spectrum analyzer are also developed to verify the performances. The results show not only the high performances in the realworld applications but the know-how of development also provides for more understanding of the system IEEE-488

which a department can take benefit of its simplicity as a learning tool in a class of modern instrumentations.