A PC-BASED WIRELESS AND REMOTE CONTROL FOR SHAPE JUDGMENT EQUIPMENT USING A ZIGBEE MODULE

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Abstract- To increase manufacturing productivity, industrial automation is required. Additionally, in order to monitor the manufacturing process, a remote online monitoring and control system becomes compulsory. A conventional remote monitoring system often uses a wire connection for communication within a control center; however, it is time-consuming and inconvenient. To overcome this drawback, a wireless design is proposed for the manufacturing process. In this paper, a case study of a remote wireless monitoring network used in a shape judgment system is introduced. In order to connect the server pc and the PLC (a controller of a shape judgment system), a ZigBee wireless module in conjunction with a transparent mode is used. Additionally, the interface of the above system is established with a Visual Basic 6.0. One of the advantages in using a wireless network to connect with a server pc and a shape judgment system is that the server pc is movable. Moreover, the remote monitoring function at the client pc can also be utilized using a TCP/IP protocol. Consequently, a prototype of a wireless network and a remote control for a shape judgment system using a ZigBee module that reduces the cost in electrical power and saves time in the system's installation is exemplified.

Index terms*:* wireless, PC-based, ZigBee, remote.