

## **Controlling of robot hand by using microcontroller with visual basic**

### **ABSTRACT**

The robot arm is the most popular robotic form used in industry. Thus, it is crucial to make a system programming which could controlled the movement of each part in the industrial robot to make it works properly. One of the simplest models of the robot arm is EDARM ED-7100 which has a controller to control the movement of the robot arm manually. In this study, the robot controller has been redesigned in order to improve this robot's function. The new controller system used AT89S52 microcontroller which has wire connected to the robot hand. A function has been added with this controller to improve the system of controlling and becomes better than the previous system (only manually). The functions of the new system include three modes for operating: manual, automatic, and computer-based. Mathematical model has been derived through an empirical method to specify the robot configuration changes. It was found from the experiment that the robot arm's movement is following a linear function.

**Keyword:** AT89S52 microcontroller; Controlling and monitoring; Robot hand (EDARM ED-7100); Visual basic