ABSTRACT

Terracing is a conservation method by making terraces to reduce the length of the slope, retain servo and reduce the speed and amount of surface runoff, and increase the chance of servo absorption by the soil. For farmers, terracing is a suitable irrigation method used in areas that have many slope areas such as in Bali, especially in the writer's village in Lemukih, Buleleng, Singaraja. In modern times such as now there are many ways that the irrigation system made on terracing. Examples such as providing a gate on the irrigation.

Many automatic servoing gates have been made, it's just that it still has shortcomings, including when there is rain and drought, then the servo that is flowed into a rice field or flowed to another servoing because of the excess servo level in the rice field is still using the power of farmers to solve it. So farmers have to check continuously into the fields.

Examples In this Final Project, a prototype of an automatic gate system for irrigation using an Arduino UNO microcontroller is used as a control system with 2 functions: Master and Slave. Bluetooth module is used as a communication link of the two Arduino. Based on the servo level in the paddy field will be detected by an ultrasonic sensor. To drive the valve using a servo motor which is connected to the microcontroller. Microcontroller system limits the servo level as a regulator of opening and closing. In this Final Project, the prototype of an automatic gate system in terraced rice fields can make farmers' performance effective. So that farmers do not go back and forth to the fields to check the servo level in each plot of rice fields.

Keywords: *Terracing, Microcontroller, Automatic Gate*