ABSTRACT

Rice is the main crop for most Indonesian people. Irrigated rice fields are able to produce national rice large enough up to 85% irrigation system is needed in order to maximize yields. A minimum internet network in the paddy field area is needed in internet access so that communication is needed that can send information wirelessly without having to use the internet network. This study discusses a system that can monitor irrigation on a simple module using the nRF24L01 module, thus making two circuits made as transmitters and receivers. The results of testing the soil measuring sensor can protect the moisture in the soil in dry conditions 0% humidity conditions 60% and 71% wet conditions, water sensors can protect water passing in irrigation with an empty status, sufficient, and a lot. Rotating servo motors to open doors complete humidity detected at less than 60% and will close approval humidity which has reached 71%. The nRF24L01 module is capable of sending messages as far as 1.1 km with an average throughput of 962.98KBps.

Key words – Rice, nRF24L01, soilmoisture, watersensor, servo motor, Arduino Nano.