

## **ABSTRACT**

Rice is a main staple food in Indonesia. Delivery of information regarding stockpile especially primary needs as daily provision turns to a problem that's feasible to be automated. Monitoring towards stockpile such as rice can be done automatically. Using microcontroller, load cell sensor, temperature and humidity sensor and also RTC, communicating via GSM Shield, a prototype device for monitoring stockpile could be made. Load Cell sensor taking the role as a weight detector, DHT 11 as a temperature and humidity sensor, RTC serves as date and time provider inside the container, and also GSM Shield as the bridge between system and user via cellular phone. Prototype device will dispatch an information about the stock quantity and act as a reminder as the stockpile dwindle. The acquired information is in the form of text message consists of how much is the stock in weight unit, temperature, humidity and also date and time (at the time of stockpile checking being done). The result of this research shows a low percentage of error from the experiment, with average error of 2.4% from the whole rice net weight and 100% accuracy on reminder function.

**Keywords :** *Load cell, DHT 11, Microcontroller, GSM Shield*