ABSTRACT

The rise of the case of helmet theft in the parking lot is very disturbing users of two-wheeled parking lot. Helmet care is an effective way to handle the theft of the helmet. Helmet custody is currently operated by officers assigned to provide locker number cards to helmet care users. Automatic helmet care system here is needed for parking lot users, lockers that can keep the helmet by using RFID which is the main key of the locker. The RFID reader is placed on the right side of the locker to make it easier for users to store and retrieve helmets. This system can be used by a user with one RFID card, without having to register first. Equipped with automatic lock (Selenoid Door Lock) to open the locker door automatically which will work if it gets electric current voltage, and IR sensor (Infra Red) as the detecting sensors of the presence of lockers, marked with green LEDs if the locker is empty and LED is red if Lockers filled with helmets. The sensor can know the locker condition, if the locker is filled with a helmet then the locker can not be used by any user and the door can not lock for 30 seconds. If the helmet on the locker has been taken then the lockers may be used by other users. The next will be displayed to be monitored through monitoring applications as well as data storage on the system. This system will be built gradually with prototype methodologies ranging from mechanical design; Microcontroller, sensor configuration, and actuator; Functionality testing tool; Synchronization of monitoring display with microcontroller. The results of the sensor readings on the system will appear on the prototype so that it can be known whether the locker condition can be used or not.

Keywords: *Lockers, RFID, Solenoid Door Lock, Infrared, Prototype*