

ABSTRACT

House is a primary human need. Therefore, the house inhabited should always feel comfortable and secure. Security systems are perceived to be very important. However, the current security system has a lot of problems, especially surveillance systems that must be 24 hours. These problems usually occur when homeowners leave home to do daily activities, or especially when leaving home in a long time. Due to the weak home security system now, then many peoples slit to commit crime such as stealing and others.

In this final project writer make construction of home security system based on Internet of Things. The title is " Design and Implementation Home Security System based Raspberry Pi using Application Telegram Messenger." When the PIR (Passive Infra Red) Sensor detects a movement, the raspberry camera will capture photos and send the results to users via telegram messenger. Then, the bot on the telegram that has been integrated with this security system will offer what we want to do next. Taking a photo or a video.

From the results of the tests performed, the average value of the process of sending photos to the user when the sensor detected a motions is 4 seconds, when controlled with bot is 5.3 seconds and for sending a video is 10.4 seconds. Then, the average value of motion detection and photo capture success is 100%. The maximum distance the PIR sensor can detect is 6 meters. The average value of camera control success to take a photo or a video using bots is 80%.

Keywords : Internet of Things, Raspberry Pi , PIR Sensor, Bot, Telegram Messenger.