

## **ABSTRACT**

Monitoring the home security system is useful for securing and monitoring the house so that the house is maintained properly and reduces the worries of the community about their homes when left far away. In this study will create a Raspberry Pi based home security system and Official Account Line. Using the Official Account Line application, or commonly referred to as Line @ (Line at), is the development of previous research that still uses SMS gateway as its output.

This security system is made so that it can be accessed by more than one user so that the warnings of home security can be known by other members of the house. The line at application can send broadcast messages that are very supportive of the security system that will be created. In the Line at application, there are options or options for users in the form of bots to display photos or videos.

From the results of testing the system, the average value of motion detection and photo capture is 100%. The maximum distance the PIR sensor can detect is 6 meters. The average value of the success of camera controls for taking photos or videos using a bot is 100%. Then, for QoS testing namely delay and throughput, the average value of delay in taking photos and videos is 2.1, 2.3 and 2.2 seconds and the delay in videos is 2.2, 2.3 and 2.2 seconds in each time. Whereas for throughput testing on photo and video retrieval has a speed of 546.7 KBytes / s and 546.8 KBytes / s, respectively. For testing simultaneous data transmission with several users, it was obtained an average of 96.6%.

**Keywords:** Home security system, Raspberry Pi, Official Account Line, delay, throughput.