ABSTRACT

Nowadays, crime in form of house robbery often occur when the owners are not in present. Because of the mention reason, home security must be improved. There are various kinds technology regarding home security, one of them is integration between CCTV and Internet of Things (IoT). With this technology, it's expected to reduce the number of crimes.

For this reason, further development is needed to overcome these problems, namely by creating a face recognition system on CCTV that can detect unknown objects and sent via Line Bot. After that, testing and analysis are carried out related to the system performance made.

From the results of testing features using the black box testing method, the features contained in the bot work well and the image sending feature of the Raspberry Pi can work to detect faces with a minimum distance of 30 cm and a maximum of 118 cm. The best conditions in this system are implemented on the camera located on the door of the house or apartment. Network analysis testing Application Face Recognition - Server - Line is divided into 3 conditions, namely idle conditions, normal conditions, and full conditions. In idle conditions it has a delay of 35.99 ms with a throughput of 188.7 kbps, normal conditions have a delay of 37.08 ms with a throughput of 184.2, full conditions have a delay of 38.93 ms with a throughput of 176.44 kbps. Value of Reliability & Availability on the network Application of Face recognition - Server - Line is 100% with the scheme done. For Line - Server - Line network analysis testing is divided into 3 conditions, namely empty hours, normal hours and rush hour. At empty hours has a delay of 109.64 ms with a throughput of 9.9 kbps, normal hours have a delay of 112.73 ms with a throughput of 9.86 kbps, and rush hour has a delay of 121.54 ms with a throughput of 9, 56 kbps. The Reliability and Availability value of the Line-Server-Line network is 100% with the scheme carried out.

keywords : *Internet of Things (IoT), Smart Home Security, Face recognition*