ABSTRACT

Crimes such as burglaries is still common in this day and age, usually it occur because homeowners are careless and make mistakes such as forgetting to lock the door of the house, according to Badan Pusat Statistik Indonesia. Home break-ins are included in cases that have the highest percentage of crime compared to other crimes, therefore it is necessary to have a proper and effective home security system to ensure the house is maintained safely.

To solve the above problem, this research aim to create a Prototype of smart home security system based on IoT using Raspberry Pi as controller, this system will be able to open the door automatically using facial recognition and will provide notifications to the user through the application, the data sent will be stored in a database that later users can access to see the time and faces that already detected by system, then network perfomance will be measured.

After doing system testing, system can perform well and face recognition accuracy of the system was 82,64 % on average. From the network test perfommed, the average delay of system was 39,63 millisecond and the average of throughput was 66,44 kilobit per second and the average of packet loss was 1,48 %. The system has an Availability of 95,34 % and a Reability of 95,11%

Keyword: *Internet Of Things, Raspberry Pi,* Door Lock*, Face recognition, QoS, Android*