

## ABSTRACT

Smart Home is a combination of information technology and computational technology that is applied in homes or buildings that are inhabited by humans by relying on efficiency, device automation, convenience, security and savings in home electronic devices. Smart Home is equipped with a sophisticated technology system for various pre-program functions such as lighting, control and many other operations.

This system is widely proposed to create a smart environment by turning on and off the device through Wireless-Fidelity (Wi-Fi) because usually the occupants of the house may forget to turn off the lights, or other devices when they leave for work or elsewhere. Users may also not know the condition of the device at home which can cause shorting of electricity.

In this final project, a prototype of Smart Home will be designed with the Telegram Bot system as its controller with the test parameters used are delay and throughput. BOT telegram can control door and lights in a miniature house. This smart home control method is expected to be useful when we forget to turn off the lights, or forget to close the door when outside the house.

Smart Home devices have proven their network performance with an average Delay result obtained 43 ms with experiments conducted for 30 times in a period of 30 seconds once. And the average throughput result obtained are 80,696 bps. And the power consumption that has been issued in the Full Load condition is 13,4 Watt, and in IDLE condition is 13,3 Watt.

**Keywords:** Smart Home, Wireless Fidelity (Wi-Fi), delay, throughput, Telegram