Abstract

The development of smart home technology is increasingly developing along with the development of in- creasingly advanced technology. In this final project, technology development has been carried out about designing an control system on smart homes to facilitate various human activities in the house. In an smart home control system, hand gesture recognition is essential for human interaction with computer. Hand Gesture Recognition that is built is a motion command received by the Kinect V2 sensor by means of Hand tracking to determine the Hand-state in each movement. Hand-state determines a desired command, the command is sent by the system through a serial port and is received by a microcontroller which can control the relay to control more than efficient. Based on the test results, the level of accuracy of Hand tracking on the system reaches 87% with an optimal distance of three meters, because the position of the joints in each tester is different.

Keywords: Smart home, kinect V2 sensor, hand gesture recognition, hand-tracking.