ABSTRACT

A clean room can be achieved if each occupant diligently maintains cleanliness. But, not all people can be exposed to dust directly, as reported on the website of the Indonesian Ministry of Health, which states that around 87-89% of Indonesian people are sensitive to dust. As for these problems, an Arduino Uno-based Dust Suction Tool Control System using an Android Smartphone will be designed to help with cleaning activities and minimize direct exposure to dust. This tool will be equipped with a dust collection bottle connected to a DC vacuum motor and fan. The drive will be controlled by an Arduino Uno microcontroller, L293D motorshield, and NodeMCU ESP8266 as a WiFi network generator and liaison with the application. The methodology used will involve data collection, tool design and construction, tool testing, and analysis. The results of testing this tool show success in dust suction up to 36 meters in Line of Sight conditions and 26 meters in Non-Line of Sight conditions. Therefore, the entire research has been successful in achieving its objectives.

Keywords : *Vacuum Cleaner, Arduino Uno, Android, WiFi, House Cleaning, Dust Suction Control System, Smartphone android.*