ABSTRACT

Blindness is a condition where people with this condition are unable to partially or completely see. This condition causes blind people to experience difficulties in their daily activities. Therefore at least it requires a cane as a tool for walking, but conventional sticks have drawbacks, namely they can only be used as a tool to find out the terrain of the road being traversed. From the workings of the conventional cane, it is necessary to increase the stick's features so that it becomes a smart stick or smart stick that can send notifications that blind people need help. By using Arduino Nano and GPRS, smart stick devices can be realized and can also be integrated with Telegram via Internet of Things technology. Features such as gyroscope and GPS sensors can also be applied to send notifications automatically when the stick is dropped or lost. In addition, the addition of a feature to detect obstructing objects when the smart stick is used can be implemented using an ultrasonic sensor and a buzzer which functions as an indicator when an object is detected as a barrier. The results of testing the sensors using the comparison method with measuring instruments, the accuracy of each sensor on the smart stick as a whole reaches 80% and testing the connection with the internet of things platform shows that the smart stick is able to integrate well with Telegram.

***Keyword**: Smart Stick, Gyroscope,* GPS, GPRS, *Arduino Nano, Telegram, Internet of Things.*