Smart Blind Stick Using IoT

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Abstract: *In this paper, a smart blind stick guidance model for visually disabled citizens has been presented. Ultrasonic sensor is added to the transmitter and receiver of the stick. If there is an obstacle in the path buzzer or voice module will alert the blind person. The pulse and spo2 sensor are used to monitor the pulse rate and oxygen level of the blind person. The Global Positioning System (GPS) is a radio navigation system that provides reliable positioning, navigation, and timing services to civilian users on a continuous worldwide basis. For anyone with a GPS receiver, the system will provide location and time information for an unlimited number of people in all weather, day and night, anywhere in the world. GPS based blind man device with user input interfacing (remote controlled based) intellectually finds the current location and gives the alert to the blind man if it was his destination area. Node MCU is the heart of the device. It stores the data of the current location which it receives from the GPS system, so that it can make use if the data stored to compare with the destination location of the user. By this it can trace out the distance from the destination and produce an alarm to alert the user in advance. Here instead of an alarm sound the blind man can directly hear the location recorded by the user itself.*

Keywords: Internet of Things, Ultrasonic Sensor, Obstacle Detection

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