Universiti Teknologi MARA

Mobility Aid for the Blind

NURUL SAKINAH BINTI ROSLI
MOHAMAD FARIZ BIN IDRIS
HAFIZUDDIN BIN AHMAD

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ABSTRACT

Reading will be a major problem for the blind as they need to touch the Braille characters for them to be able to read. They are also relying on the sense of touch other than hearing. The research is about the mobility aid that will help the blind. The objectives of the research are developing a prototype that can detect the object in front of the blind together able to tell them the bus number approaching the bus stop and the name of the bus stop they are currently at. Travelling by bus makes it very difficult for them as they have to depend on other people around them. A prototype on aiding them with their mobility will play a significant different in their life. The research used the component from Parallax Inc. and programmed the component by using Basic Stamp 2. The PING))) Ultrasonic Distance Sensor is used to detect the object in front of the blind. Other than that, 433 MHz RF Transceivers are used as transmitters and receiver to differentiate between different bus numbers and the Emic 2 Text-to-Speech Module to tell the blind the bus number of the bus approaching the bus stop. The Emic 2 Text-to-Speech Module is also being used to tell the name of the bus stop the blind is currently at. The results show that the research helps in aiding the blind. At the very least, it is safer to move and more independent in travelling by bus. The results from the testing make it a potential device to be used by the blind community.

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