

ABSTRACT

Accessibility is the design of a building that guarantees security and is easily accessible to everyone and is no exception, including individuals with disabilities. One form of accessibility is the guiding block or guide texture tiles that guide the blind pedestrians in public places. However, the existing guiding block sometimes makes blind people with accidents such as being hit by pots or electric poles.

The number of blind people in Indonesia in 2017 amounted to 1.5% of the population in Indonesia. The main causes of blindness in Indonesia are caused by cataracts, glaucoma, refraction disorders and so forth. At this time, the tool to help the blind to do activities is just a stick that has a length of 120 cm, the stick has limitations such as the reach of the tool, can not detect various objects around the person in a fast time.

In this final project research will be made a tool in the form of gloves to help and ease activities such as knowing the object that is in front of the blind people. With the help of ultrasonic sensors then processed using Arduino Nano. With the output produces vibrations and sound coming from the dc motor and buzzer. Can tell how close the object is.

The test results were carried out ten times in terms of distance and delay in three conditions. Gloves have a small error in terms of measuring distances but have a high error rate for each object. Then in the delay test, there is a slight difference in values for different objects and at certain distances from one to three meters in three conditions.

Keywords: *Accessibility, blind, Gloves, Ultrasonic sensor, Arduino nano.*