

**Blind Aid Stick: Hurdle Recognition, Simulated
Perception, Android Integrated Voice Based
Cooperation via GPS Along With Panic Alert System**

Abstract:

Evolution of technology has always been endeavored with making daily life simple. With a fast paced life everybody today is harnessing the benefits of technology except some parts of the society .One of them is the visually impaired

Who have to rely on others for travelling and other activities? This paper aims at providing one such theoretical model which incorporates the latest technologies to provide efficient and smart electronic aid to the blind. We have used IR sensors along with ultrasonic range finder circuit for hurdle detection. Bluetooth module which along with GPS technology and an Android application for blind, will provide voice assistance to desired location and in panic situations will send SMS alert to registered mobile numbers The basic objective of the system is to provide a convenient and easy navigation aid for unsighted which helps in artificial vision by providing information about the environmental scenario of static and dynamic objects around them.

Introduction:

Vision is one of the most important senses of as most of the information humans gets from the environment is via sight. WHO reported that in august 2014, about 285 million people suffer from lack of vision .It is estimated worldwide: 39 million are blind and 246 million have less vision. Around 90% of the visually impaired live in low income conditions. 82% of people living with blindness are around 50 and above. Globally, uncorrected refractive errors are the main cause of moderate and severe visual impairment; cataract is the leading cause of blindness in middle- and low-income countries. The number of people visually impaired from infectious diseases has reduced in the last 20 years according to global estimates work. 80% of

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the visual impairments can be prevented or cured. The of fellow commuters. The most commonly used tool is still the blind stick .It suffers from drawbacks like lots of practice, range of motion, less reliability in terms of dynamic hurdles and also range detection. We will try to modify this cane with electronic components and sensors. The ever growing technology and with recent developments can help in artificial and accurate navigation. Our model uses GPS technology along with Bluetooth module which then will initiate an android application which will connect to Google maps for navigation. In addition we have used ultrasonic and IR sensors which help in obstacle detection and on hurdle recognition will ring the speaker for different durations to indicate different distances. We wish at presenting an inexpensive and light weight and accurate model which helps in effortless navigation for the blind. Distress mechanism will send locations of longitude and latitude to preregistered mobile numbers in situations of panic basic problem which every blind person faces is with regard to commutation and navigation in daily life. The most basic tools for them are walking cane and guide dogs and also on kindness

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