Abstract

Of the 37 million visually impaired people across the globe, over 15 million are from India. [1]. The world today demands people to be independent, irrespective of their challenges, mentally or physically [2]. Despite an increased amount of technologies and systems designed to address the navigational requirements of the visually impaired community, current research has failed to sufficiently address the human issues associated to their design and use [3]. Sensors hold a wide scope of development, implementation and improvement in this area. Several technologies have been developed, based on sensors to meet the day to day needs of this community. But they have not proved to be very helpful due to various reasons like cost,
portability etc. Therefore, before we proceed to the further developments in this area, we must closely study the Human Computer Interaction that too from the viewpoint of the visually challenged. It has been proved that visually impaired vary individually and collectively in their use of environmental context during micro- and/or macro-based navigation [15]. In this paper, we will take a look at some technologies developed so far, their advantages and drawbacks, and thus conclude the various aspects to be focused on to give way to better technology that will help the visually impaired community. We also see how sensors and their technological improvement can prove to be helpful.

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Index Terms

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Image Processing

Keywords

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