

# Review of: "Design and Realization of a Low-Cost Smart Walking Aid for Visually Impaired and Blind People"

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**Potential competing interests:** No potential competing interests to declare.

This work presents a sensor system adapted to a walking aid for visually impaired people. A cane is presented with the incorporation of ultrasonic sensors, as well as water sensors, for obstacle and water detection. Showing successful results on the performance of the designed system.

In the Introduction, you present a set of sensorized walking aid that help people who have a visual difficulty, what is the contribution of your device with respect to the different canes presented? Is there not a greater number of examples of walking aids that perform this type of tasks in the state of the art? It would be appropriate to increase the number of citations in the introduction, and to provide an insight into what is new about the novel design you present. The number of citations in the state of the art is very few.

It is stated that in the event that the ultrasonic sensors detect a presence a buzzer sounds, has allowance been made for the possibility that there is excessive noise in the environment in which the person is moving and that sound cannot be heard?

Has the possible inclination of the cane been taken into account when placing the ultrasonic sensors? I understand that not all users of this type of cane will use it in the same way, and some of them will carry it in a more inclined way than others.

There is a device that sends information about the location of the user in case he/she presses a button. Has it been taken into account to automate the alarm system? since most of the times when the alarm may be sent, the user may not be in a position to press the button.