Guidance System for Visually Impaired People

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Our project is meant to help visually impaired people regain their independence from medical staff. We want to create a means for these patients orient themselves without the need for help in open or closed spaces. The communication between the electronic system and the people which are visually impaired is made by means of vibration motors that point out the obstacles around the user. The "eyes" of our project are three ultrasonic motion sensors, which work on the principle of bat orientation, creating a 3 - dimensional image that highlights any obstacle within a 130 degrees opening. The 3 motion sensors have a radius of 2.5 m and an opening on the vertical axis of 5 degrees, thus detecting objects below the hip. In addition, we have systems that can guarantee the safety of users, such as a GPS system that records the patient's journey data and applications through which data can be read by a doctor or caregiver. The tests of our device were made by orienting a user on the corridor of a crowded high school in Bucharest.

Awards Won: