AERIAL OBSTACLE DETECTION SOFTWARE FOR THE VISUALLY IMPAIRED

(P) TECNOLOGIA PATENTADA

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RESUM

The research group "Mobile Vision Research Lab" of the University of Alicante has developed software aimed to detect aerial obstacles (e.g. tree branches, awnings), addressed to the visually impaired.

The main advantages of this technology are that this software can be executed in any smartphone equipped with a 3D camera, which is used to detect the distance to the obstacles, and it provides an accessible interface that alerts the user by means of beeps or vibration when it finds an obstacle. The alert becomes more and more frequent as the obstacle is closer. The system is comfortable and discreet making easier the user social integration.

The technology can be used in the following industrial sectors: handicap aids, robotics, and computer vision systems. The research group is looking for companies interested in exploitation and/or adaptation of the technology as well as developing of technical cooperation projects in this area.

AVANTATGES I ASPECTES INNOVADORS

MAIN ADVANTAGES AND INNOVATIVE ASPECTS

- The technology is **embedded in a smartphone**.
- **Ease of use** via touch interface specially designed for the blind. Items and options are vocalized.
- The system does **not require previous calibration** to start the obstacles detection.
- In contrast to others, the use of this technology is **comfortable** and d**oes not attract attention**. It facilitates the user **social integration**.
- Also, the system warns the obstacles via acoustic signals or vibrations **without depriving the user from the sense of hearing**.

APLICACIONS DE L'OFERTA

- Companies developing software for mobile devices.
- Companies specialized in products for visually impaired.
- Organizations for visually impaired support (foundations, associations, national and regional public authorities, etc ....)
- Other companies or entities interested in new developments in robotics, and computer vision systems.

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- Software License Agreement, know-how and / or patent to exploit the technology by third parties.

- R & D cooperation projects for development or adaptation of technology to other applications or sectors.

- Outsourcing Agreement for advisory activities, technical assistance, development of turnkey software, training, etc...