Politechnika Łódzka
Instytut Elektroniki

POI Explorer

Personal navigation system based on points of interest for blind and partially sighted mobile phones users

The POI Explorer application is intended for mobile phones with the Android operating system. It aids independent travel by blind or visually impaired persons in an urban environment.

The application is used to define routes and points of interest (POI), such as intersections, pedestrian crossings, addresses, ATMs etc. The program guides the user to a chosen destination or along a stored route. The defined POIs are stored on a server and can be shared among groups of users.

The text descriptions of POIs can be supplemented with voice recordings and additional notes. The points are grouped into categories, e.g. intersections, shops, government buildings etc. The solution allows for fast selection of POIs and travel along selected routes.

Innovativeness of the solution

The POI Explorer application aids independent travel by persons with visual impairments. The software works under the Android operating system. The interface was developed with the help of the target users and is intended to integrate with the most popular text to speech synthesizers. The software allows management and edition of POIs (addition of points, descriptions, text notes, voice recordings) and user defined routes.

The software guides the user along a pre-defined route using an electronic compass and GPS. The system stores geographical data on an external server and uses original algorithms developed for pedestrian route planning. It is also compatible with other route planning software.

For whom?

The POI Explorer was developed for blind and visually impaired users; however, it can be used by any pedestrian that wants to use it for navigation.

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