Research on Semantics used in GPS Based Mobile Phone Applications for Blind Pedestrian Navigation in an Outdoor Environment

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Abstract

The research is based on studies on semantics used in GPS guided mobile navigation applications in particular for blind pedestrians. The scope is in information of words or narrative use in guiding them and how to improve the effectiveness in the semantics via machines learning. These are tested in this research. The long term goal is to create a mobile technology, self-contained system that allows blind users to navigate through unfamiliar environments without the assistance of guides but mobile application. The experiments took place at MFB (Malaysian Foundation for the Blind) using common existing GPS based mobile applications and the results were used to prove the hypothesis that the blind are not supposedly at a substantial disadvantage in independent navigation because of the insufficiency and abnormality in providing information or semantic for them with the GPS navigation technology of today. The outcome derived from the research can further help in creating and improving the semantics of the GPS based navigation technology for the blind pedestrians in an unknown environment.

Keywords

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