Reviews For Paper

Paper ID   23

Title   WAY-GO Torch: An intelligent robotic flash light

Masked Reviewer ID: Assigned_Reviewer_1

Review:

Question	
Detailed Comments	Review of Way-Go Torch: An Intelligent Robotic Flashlight The authors propose a smart flashlight able to project information onto a surface to guide humans trying to navigate to a destination. The idea is excellent and for the most part the engineering appears to be well executed, with three prototypes towards the ultimate goal of a robust location-aware projected guidance system. However the authors lack experience technical writing experience so the paper ends up looking more like a student project report combined with a student essay on possible uses of such a device than like a scientific evaluation of a technical approach to a real-world problem. The scope of the work is not clearly delineated in the introduction. The application to search and rescue seems like an afterthought, stuck into the abstract introduction and last part of the paper only to satisfy the theme of the conference. In some cases it is very difficult to tell whether the authors are claiming to have implemented and evaluated a particular mode/feature or whether they are just giving it as an example of the possibilities of the technology. The video is helpful but only informative; it does not give the reader/viewer more insight into the scientific validity of the approach. In summary, I find that the project described in the paper is an interesting project that has already produced concrete useful results. However, for the work to be suitably presented as a contribution to a scholarly conference like SSRR, I believe the authors need to perform scientific evaluations of the suitability of the device for specific search and rescue applications then document their approach and experiments in a paper written with approrpirate technical style. Detailed comments: - The English is mostly understandable but most of the sentences have one or more grammar or typographic errors and should be improved. - The point of the first paragraph of section II A is unintelligble -- RFID tags are mentioned but it is not clear if they are a proposed solution or an inadequate solution, etc. The authors are apparently working on aiding outdoor navigation but there is a lot of focus on indoor issues without any reason. - The authors should study the style of well-written literature

| | surveys in their favorite journals and try to emulate the academic writing style. As it is the literature survey looks unprofessional.

- On page 4, section V, subsection A, first reference is made to a an area with an entrance gate, destinations, and a map. But the need for an a priori map has not yet been introduced. This is part of the scope of the work and should be brought up from the very beginning in the introduciton.

- Mention is made of experiments to establish GPS accuracy of 1 m but no mention is made of how the experiments were performed.

- The device is proposed for outdoor navigation yet in the text e.g. section V B the authors keep coming back to possible indoor applications. Alternative applications could certainly be discussed in the introduction or conclusion but are not relevant in the context of the technical description of the design of the device.

- The technical description in Section V keeps mentioning the college campus application as if it is the ultimate application of the technology, but this is a conference on safety, security, and and rescue.

- Section V E mixes literature survey and possible future versions of the technology with technical description of the device. It is not clear if the authors have actually implemented and evaluated a biking mode or not.

- The video is very helpful to understand what the authors have actually accomplished and implemented, but that should be clear from the paper as well, without reference to to video.

- The video is not very clear, with some very fuzzy scenes in which e we cannot see what is being projected.

- There is no technical evaluation of the efficacy of the device for any of the presented usage scenarios. |
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Masked Reviewer ID: Assigned_Reviewer_2
Review:

Question	
Detailed Comments	The description is clear. However, the conclusion introduces some doubts on the real efficacity of the system.

Masked Reviewer ID: Assigned_Reviewer_3
Review:

Question	

Detailed Comments	This is a very good start on a paper - very interesting application of existing technology. There are issues with the technical approach which should be addressed, and the authors should seek the assistance of an editor to improve the overall presentation. There are various opportunities to improve the paper and approach, and possible directions, including: (1) How to make the approach suitable to users who may not be familiar with mapping concepts. (2) Make the system suitable for GPS-denied, including indoor, environments. (3) To make the projection visible in daylight. (4) To provide projector head stabilization at a bandwidth high enough for someone walking. (5) How to plan an exit path without an a priori known map requires a map of the environment to plan an exit path. (6) Conduct a user evaluation of the system, demonstrating efficacy.