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Finger-Worn Assistive Device for Detection Tracking and Recognition

(Conference Paper)

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Abstract

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This paper describes the design and development of the Smart Eye Assistive device . The domain of Finger-Worn assistive devices as user interfaces has only recently begun to be explored and the miniaturization of technology has enabled us to develop a device , which utilizes natural pointing gestures to connect the user with his/her surroundings. In the following paper, the development of the Smart Eye Hardware Software is presented. Utilizing off-self components, and image processing algorithms based on MATLAB image processing toolbox, scenarios where the Smart Eye can be an effective tool for day-to-day interaction, reactions from users as well as its drawbacks are discussed and a conclusion is reached, that such a finger worn device is highly viable for future development. © 2018 IEEE.

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Author keywords

Gestures | Image processing | Pointing based interactions | Visually impaired | Wearable assistive devices | Wearable input devices

Indexed keywords

Engineering controlled terms: MATLAB | User interfaces | Wearable technology

Engineering uncontrolled terms: Assistive devices | Design and Development | Gestures | Image processing algorithm | Pointing gestures | Visually impaired | Wearable assistive devices | Wearable input devices

Engineering main heading: Image processing

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