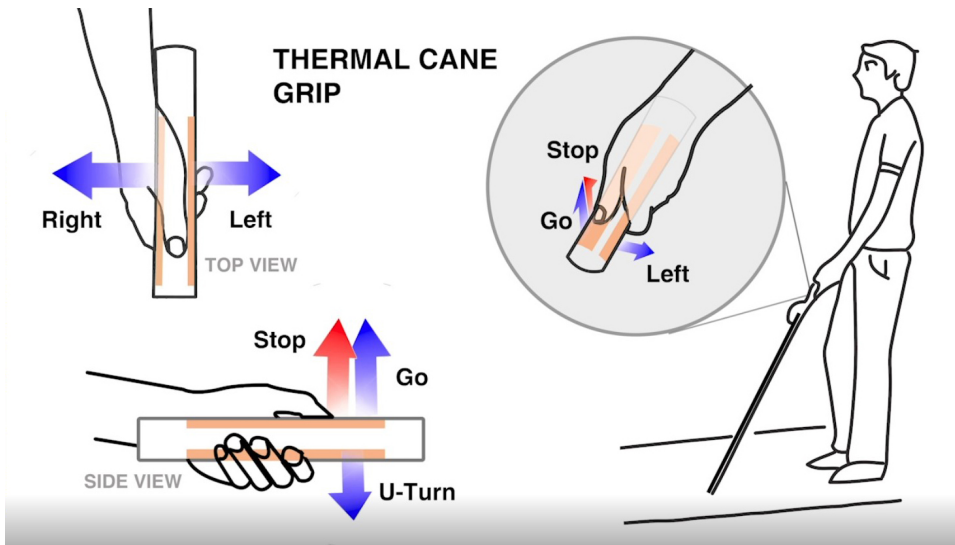# Electronic Cane Grip Instrumented with Thermal Haptic Feedback

Health & Wellness

Consumer Electronics

Remarks
Inventions Geneva Evaluation Days (IGED) 2021 - Bronze Medal

IP Status
Patent granted

Technology Readiness Level (TRL) ❓ 5

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Opportunity

White canes are widely used by the blind and visually impaired people for mobility and obstacle detection. The existing smart/electronic cane grips in the markets are mainly used to detect the approaching obstacles notifies the users with the help of vibrohaptic feedback. However, they do not provide any navigational assistance to the users. Hence, the users have to rely on audio based mobile applications (google maps etc) for navigation which can interfere with the surrounding sounds.

Technology

The invention uses thermal haptic elements that offers thermal feedback on the white-cane grip which can be programmed to be useful for navigation as well as other notifications from a connected smartphone or nearby by surrounding devices to obtain a sense of directional cues or notifications on the move.

This electronic grip can be wirelessly connected to an external electronic device such as a smartphone/smartwatch/computer or other handheld devices and can communicate between each other. While in use, the device can output thermal feedback (hot and cold) with distinct intensities and patterns (predetermined by the users) corresponding to the signals received from the connected external devices.

Advantages

- Easily integrate on ordinary white-cane for visually impaired people.

- Able to exhibit various thermal patterns depending on the input or pre-set parameters for different users.

- Provides different levels of notifications with distinct intensities and patterns to guide the users with their navigation directions, alarms and other smartphone notifications.

Applications

- The device has potential applications aiding the visually impaired people in navigation and get smartphone notifications on the go.

Develop
Concept

Proof
Concept

Follow-on
Funding

Build Value