Steps in right direction for blind

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NOWADAYS PRACTICALLY EVERYONE uses a smartphone to access information while they are in the office or on the road.

The touchscreen on smartphones while being handy and intuitive for most users for inputting is not really convenient for the visually impaired.

The Center for E-Commerce Infrastructure Development, under the aegis of the University of Hong Kong's department of computer science, has set itself the task of creating a smartphone control device and signpost system that will be useful and convenient for the visually impaired.

Currently under development, the E-Guide is a kind of signpost system that gives directions and provides information about the location to smartphone users who are unable to use conventional displays.

At the moment to help the visually impaired, there are Braille layout plans or plates in malls, train stations and other public places. However, since the plates are installed at specific locations, it can be a hassle for the visually impaired to find them if they are unfamiliar with the area.

The E-Guide works on wireless and verbally conveys both the indoor and outdoor location to the user. The visually impaired will find it much easier to get around on their own with the device.

With the E-Guide connected to Android smartphones, by using a special keypad, apps can be easily accessed, including mobile applications (e-mails, SMS, e-books) and internet information (weather, finance).

To find out location quickly and easily, the visually impaired can use a hotkey that works using GPS when outdoors and alternate positioning data sources when indoors.

E-Guide uses Bluetooth v4.0 to determine the proximity between the user and the positioned data source. There are many advantages to this.

First, the consumer electronics industry widely
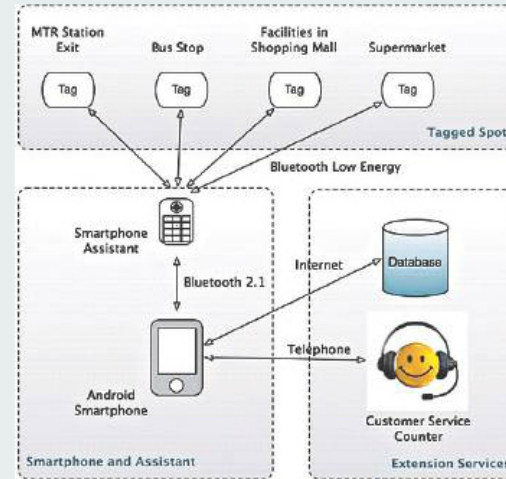
supports Bluetooth technology, and this will help to drive costs down on the E-Guide.

Second, the signpost system using Bluetooth can operate on ordinary AA batteries for one year. At present, the Hong Kong Society for the Blind, the Hong Kong Federation of the Blind, some shopping malls and public transport companies are participating in a pilot project where the signpost system is deployed and tested in the real world environment.

The aim of our pilot testing is to simulate the portable signpost in as many environments and scenarios as possible.

When this technology is eventually developed, tested and installed, visually impaired users can easily use the various apps on their smartphones while our novel portable signpost system will give them directions and provide them with the location of their surrounding environment.

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