

Microsoft's bone-conducting headset helps blind navigate in cities

November 6 2014, by Bob Yirka



Microsoft has teamed with Guide Dogs, a charity that pairs blind people with seeing eye dogs and the UK government's Future Cities Catapult project, to develop a headset that can help the blind better navigate while moving around out in the world. The headset is part of an effort called Cities Unlocked that seeks to provide more freedom to the blind—studies have found that the majority of blind people leave their homes far less than sighted people due to the difficulties in getting around, and many remain unemployed as a result.

The [headset](#) is worn like earphones, but press against the jawbone on either side allowing sounds to reach the ear directly while also allowing

the ears to remain free to hear sounds in the environment. The headset sends meaningful noises and helpful voice messages to the user, as he or she walks or rides on transport. In many respects, it appears to be like an audio version of a heads-up display—it also has a little box that holds an accelerometer, gyroscope and compass and an additional GPS chip so that the wearer's position can be tracked.

As the person walks, they hear a clicking noise that changes when they veer from a prescribed path, they'll also receive messages such as warnings about objects in their path, directions, or about items of interest in the area. The point, Microsoft officials told the press, isn't just to help [blind people](#) get around, it's also to help them connect more with their environment as they journey, in ways that those with sight take for granted, offering them more freedom and enjoyment.

The headset gets its information from a smartphone via Bluetooth, carried by the user, which in turn gets its information from the Internet via WiFi. Also, some of the information received by the headset comes from devices placed in the environment that emit beacons, thus for the entire system to work as planned, beacons would have to be installed all across a given city. Microsoft, along with assistance from workers with Guide Dogs and blind volunteers, tested the system in a London suburb and found that most who tried it felt the device offered them more freedom of movement, particularly when visiting unfamiliar areas.

Some have noted that the headset might also be desired by some sighted people as well, as it could offer directions less obtrusively than a regular smartphone.



More information: news.microsoft.com/stories/independence-day/

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Citation: Microsoft's bone-conducting headset helps blind navigate in cities (2014, November 6)
retrieved 18 April 2024 from

<https://techxplore.com/news/2014-11-microsoft-bone-conducting-headset-cities.html>

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