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Newsletter**

Talking Glasses – A Revolution for Low Vision Patients

Mobileye is an Israeli company that develops technology around safe driving. While helping drivers avoid pedestrians and hazardous obstacles, their scientists realized the technology could be applied to helping low vision individuals navigate daily life. OrCam, a portable artificial vision device, is the result.

OrCam uses an optical character recognition device, capable of recognizing text, monetary denominations, faces and other household objects. For example, a photo of the face of a family member is saved along with the name. The machine will then 'recognize' the family member based on the photo on file. The same can be done with pieces of equipment or furniture, so the OrCam can be programmed to identify these objects in the future.

This technology is housed in a 'magic box' attached to the corner of a pair of eyeglasses. The box contains a small lightweight

camera and computer weighing just over an ounce. Users can activate the device by pointing to an object, or tapping on the device. They will 'hear' OrCam read the text, name the person, or describe the object through a small earpiece. There is a portable battery and computer pack that the user can hold or put in a pocket.

A limited study was performed at the University of California Davis where 12 low vision patients were tested using no assistive devices, then using whatever low vision aides they currently used, and finally using OrCam. The patients were given 10 daily tasks and one point was earned for completing each task. Activities included reading an email message from a computer tablet, reading a newspaper article, recognizing denominations on paper money, reading signs on the wall and at 8 feet away, reading a page from a book, reading a menu and recognizing products (three different cereal brands in similar packaging).

Without any device, the 12 study subjects were able to complete an average of 2.5 of the tasks. Seven of the 12 patients tried the ten tasks again with their own assistive technology and they managed a score of 6/10. When the study subjects used the OrCam, the average score significantly improved to 9.5/10.

Although a very small study that showcased the precise tasks OrCam was created for, it did appear that patients improve their ability to function using this technology.

There are more than 2,000 OrCam devices already in use in the U.S. The price tag is around \$3,500. Patients who also suffer from hearing loss would not benefit from the OrCam as it depends on an automated voice describing or reading to the eyeglass wearer.

OrCam is only one of many tech companies working to create new products for the low vision community. The rate of innovation in this arena is truly impressive. You can learn more about this new device by visiting the company's website, www.orcam.com.