

The Eye-Phone

Think You Like Your iPhone? The Blind Love It as Life-Changing

by Anne Ford

What's not to like about the iPhone? It lights up, makes nifty noises, takes pictures and even plays music. But when you get right down to it, all anyone really needs is a plain ol' cell phone that makes calls, right?

Not if you're blind or visually impaired. For them, the iPhone represents much more than just a shiny indulgence. It's a currency identifier. A book reader. A street navigator. A color identifier. In other words, it's the closest thing technologically possible to a set of working eyes.

Sound like an exaggeration? Listen to the people who know firsthand.

"Since I got my iPhone, I'm half as blind as I used to be," says Tom Babinszki, the blind director of the Forsythe Center for Entrepreneurship at The Hadley School for the Blind in Winnetka, Illinois.

"Last Wednesday, my life changed forever. I got an iPhone," reads an entry from the online journal of Austin Seraphin, a blogger in Pennsylvania who has almost no vision. "In my more excitable moments, I consider the iPhone as the greatest thing to have ever happened to the blind."

"The things that I am able to do—it's unbelievable," says Gregg Pusateri, the executive assistant to the executive director of the Spectrios Institute for Low Vision in Wheaton, Illinois, who lost much of his vision to a retinal degenerative disease as an adult.

So what makes this particular piece of technology such a life-changer? The answer lies largely in a feature called

VoiceOver, which comes pre-installed on every iPhone at no additional charge.

VoiceOver is a screen reader, that is, a function that reads the contents of the screen aloud when the user touches it. When it's activated, the user hears what's displayed on the iPhone's screen—texts, email, applications, battery level, time of day, wireless signal strength—simply by tapping, double-tapping, dragging or flicking it.

In other words, a blind iPhone user interacts with the device the same way a sighted user does: by touching the screen. That's a revolutionary concept. As recently as 2008, a visually impaired Lion told this magazine, "Touch screens are a blind person's worst enemy." No longer, at least, not where Apple is concerned.

To be clear, the iPhone is not the only smartphone on the market with a screen reader. But unlike VoiceOver, the screen readers available on other phone operating systems are often sold as add-ons (requiring users to shell out additional money, in some cases considerable amounts of it). Experts say they aren't as reliable or as easy to learn as VoiceOver, and not all of them allow visually impaired users to access the Internet or use email.

"If you want a smartphone, you want an iPhone," David Flament, manager of adaptive technology services at Chicago's Guild for the Blind, tells his clients. He adds, "It is orders of magnitude better [than other smartphones on the market]."



One of the advantages of the sleek iPhone is that it is not bulky or awkward like some other tools for the blind.

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Strangely, it's not clear that charities, state departments of rehabilitation and other organizations that donate accessibility devices to the visually impaired are fully aware yet of the iPhone's unprecedented powers. "Even the professionals who serve the blind are on a learning curve," says Tom Perski, senior vice president for rehabilitation services at the Chicago Lighthouse. "They have some catching up to do as to the specific things an iPhone can do."

That's a shame, given how practical and cost-effective the iPhone is, particularly in its ability to provide a multitude of functions in a single device. "It replaces so much other technology," Seraphin says.

For example, since different denominations of paper currency are not distinguished by size in the United States, blind people have historically had to ask a sighted person for help in keeping track of their money—something that can be embarrassing for an adult. "The problem is not that I don't trust the person [identifying the money]; the problem is that I don't want to be different," Babinszki says. He could have purchased a stand-alone device that identifies money for the blind, but balked at its \$100-and-up price tag.

Instead, he downloaded an iPhone application called the LookTel Money Reader, for all of \$9.99. Now, to identify a piece of paper currency, he simply holds his iPhone over the bill, and the application speaks the denomination. An Internet connection is unnecessary.

Another application, Navigon North America MobileNavigator, turns the iPhone into an accessible mobile GPS unit. At \$59.99, the app might seem pricey until you consider that a separate handheld talking GPS system for the blind currently sells for \$929.

And then there's Color Identifier, a \$1.99 application that allows users to determine the color of an object by taking a photo of it. Compare that to stand-alone devices that do the same thing—for hundreds of dollars more. And consider how useful it would be for, say, a blind businessman who lives alone to be able to make sure that his tie matches his shirt or that he's sorted his socks correctly.

The Color Identifier application has even more practical uses, too. Before he got his iPhone, Seraphin had to switch his Internet service provider because the company wouldn't provide any help until he told them what color the light on his modem was. "I just got so mad," he says. Now he doesn't have to get angry. He just gets out his iPhone.

Two of the most potentially useful applications for blind iPhone users are completely free. VizWiz allows users to take a photo of an object, record a question about it, and email both photo and question to an anonymous sighted worker, who replies with an answer within seconds. "Imagine I'm in a hotel and I want to get a Diet Coke out of the vending machine down the hall," says Brian Charlson, director of computer training services at the Carroll Center for the Blind in Newton, Massachusetts, and a member of the Newton Lions Club. "Which button is the Diet Coke button? I have no way of knowing. So I go to the machine, I take the picture, I ask the question, I wait for 15 to 30 seconds, I get a text message back telling me it's the third button down. Huge value."

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The second, called oMoby, allows the iPhone user to identify an object by taking a picture of it. The application then uses pattern recognition to tell the user what the object is. Charlson recently used it to make sure that the cereal he was buying at the grocery store was, indeed, the Rice Chex he was after.

The iPhone can also be used to download audio books or e-books. “Reading books, for a blind person, has never been better than this moment,” Charlson says. “Even when you take into account all the Braille books ever produced in the world, it’s fewer than the number of books published this

month in the United States.” In other words, the number of books accessible to the blind has exploded exponentially.

From the perspective of a blind or visually impaired user, one of the most attractive features of the iPhone is that it’s so culturally recognizable. “Most appliances for the blind in the past made you look awkward or different,” recalls Perski, who is legally blind. He remembers using a complicated device that allowed people with low vision to read a newspaper by scanning over it with a mouse; the text was then displayed inside a special pair of glasses the user had to wear.

Helen Keller advocated the latest technology for the blind, even when costly. Photographed in 1924 at a meeting of the Uptown Lions Club in New York City, Keller launches a campaign to give radios to poor blind children. The radios cost \$75, the equivalent of \$950 today.



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“I would sit in a café in an airport and use this, and I can’t tell you how many people came up to me and asked what I was doing,” he says. “I was stopped on an airplane once because they saw all these wires and they were concerned. Now I can just stick my earphones in and read the *Chicago Tribune* [that is, have the iPhone read it to him] and not be bothered. Reading the newspaper, which I hadn’t really done in 20 years—to be able to do that again is really nice.”

Blind students in particular are likely to appreciate having the same device that many of their sighted friends have. “It’s something that everyone recognizes,” Seraphin points out. “When I was a kid, I had to jump through all kinds of administrative hoops to bring special technology to school. It definitely singled me out. When a blind person takes out an iPhone, it’s just like, you know, cool.”

iPhones aren’t the only Apple products that feature VoiceOver. The feature is also available on Apple laptop and desktop computers, iPad tablets, iPod Shuffle music players, iPod Nano media players and Apple TV digital media receivers.

Another Apple feature for the visually impaired is Zoom, a built-in, full-screen magnifier. Braille users can use their Apple devices with a wireless refreshable Braille display. A touch-screen Braille keyboard is under development.

And for iPhone 4S users, there’s Siri, a virtual personal assistant that recognizes natural speech and replies out loud—thereby allowing users to bypass the keyboard altogether.

“The Siri function is another revolutionary thing,” Per-ski says. “I can ask Siri all kinds of questions that come up throughout the day,” from “What’s the temperature outside right now?” to “What meetings do I have scheduled today?” to “Do I have any new email messages?” (which VoiceOver will then read aloud). Siri can also schedule reminders, perform Internet searches and provide directions, among other things. (It also has a sense of humor. Tell it “I love you,” and it responds, “I bet you say that to all your Apple products.”)

Legally blind Lion Mary Lee Turner, 36 O district governor in Oregon, recently purchased an iPad, mostly as a means of keeping track of her many Lions-related duties

and appointments. Because she has some remaining vision, she initially used the Zoom feature. Since incurring a back injury that makes it impossible for her to lean over the device to the extent necessary to see the screen, she’s switched to VoiceOver. While she’s still becoming familiar with the technology, “there’s lots of things I’m really looking forward to doing,” she says.

“I used a large-print calendar in the past, and that was very inefficient,” she continues. “A, it was heavy, and B, flipping from page to page wasn’t very professional. I don’t have time to not be full-speed. Computer skills really help level the playing field for folks who are visually impaired.”

While white canes and similar low-tech devices will remain hugely useful to the blind, of course, she would like Lions to begin considering donating iPhones and iPads to the visually impaired community as well. “I don’t know another Lion who has considered purchasing these tools for somebody who’s blind or visually impaired,” she says. As an incoming district governor, she hopes that will begin to change.

The Ottawa Lions Club in Illinois did recently donate seven iPads at \$500 apiece to local children with hearing loss. The iPads’ text-to-speech (and vice-versa) capabilities

make it possible for children who use sign language to communicate with people who don’t. “We’re a small club, and we don’t have a lot of money,” says President Roberta McConnaughay. “But this was just the perfect opportunity to pay for something that was really needed.”

iPhones begin at about \$200, with a monthly fee starting at \$59.99, depending on the carrier and plan selected. That means a Lions club could conceivably donate an iPhone and a year’s worth of service for less than \$1,000. That’s about the same amount that some clubs have donated in the past for a single stand-alone GPS device for a blind person.

In other words, if your club wants to make a significant impact on the life of a blind or visually impaired person, there’s no reason not to give the iPhone serious consideration. Need one more bit of convincing? Consider this:

“I can give sighted people directions now,” Seraphin says gleefully. “I can just pull out my iPhone and say: ‘Let’s see.’”

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