Technology rarely realizes its potential to help disabled

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Living in Silicon Valley, it's easy to get caught up in the excitement of technological change. Unfortunately, it's also easy to overlook those who may be left behind.

I got a lesson in the issue this past week, when I gave a presentation to the Hearing Loss Association of the Peninsula. The group, part of a national organization that advocates on behalf of those with hearing problems, asked me to speak about computers and technology at its monthly meeting.

In preparing, I realized just how little I knew about the technology-related issues faced by those with hearing loss and other disabilities.

Technology in many ways has been - or could be - a boon for such people. The Internet, for example, has big benefits for those with certain disabilities. It's largely text-based, which is ideal for those with hearing loss. The computers used to connect to the Internet can translate that text-based data into speech or enlarge it for vision-impaired people.

Despite these benefits, the Internet is underutilized by those with disabilities. While 81 percent of American adults use the Internet, just 54 percent of adults with disabilities do.

Advocates say that the expense of broadband Internet access and other newer technologies can discourage those with disabilities - who tend to be less affluent than the population as a whole - from using them. Other

factors, such as a lack of standards for disability-friendly technologies and tepid support for them from technology companies, can make new types of gadgets and Internet services frustrating to use or inaccessible for those with disabilities.

That's unfortunate, because there are a lot of folks out there with various disabilities. Some 25 percent of Americans have a disability that affects their daily life, according to Pew Research. Hearing loss alone affects some 17 percent of American adults - about 36 million people - according to the National Institute on Deafness and Other Communication Disorders.

In many cases, technology companies aren't doing a good job of serving these people.

Take Web video, for instance. It's booming, with Americans watching more and more of it. Many technology experts predict that video will soon displace text as the predominant method of communication online.

In the offline world of television and DVD movies, much video comes with captions that make it accessible to those with hearing loss. In Web video, though, very little is captioned.

Apple's iTunes, for instance, sells television shows, but doesn't offer any with captions. It offers movies with captions, but they represent a fraction of the total movies it sells. In some cases, movies that do have captions in their DVD versions don't have them on iTunes.

But it's not just iTunes. Few of the movies or TV episodes and Web videos offered by the major streaming video providers - YouTube, Hulu, Netflix and the broadcast channels - offer captions.

Even when captioned videos are available, they can be hard to find. You

can filter movies on iTunes for those with captions, but you have to use the program's advanced search feature to do it. The only way I could figure out how to find captioned videos on CBS.com was by clicking on each one.

Then there's the issue of turning on the captions. For those few YouTube videos that have captions, users can view them by clicking on a "CC" button in the control area that includes the play button. The process is similar on Hulu. But for videos on CBS.com, you have to click on a "more" button to see the option to turn on captions.

Some of this is changing. A new federal law requires that video that was originally broadcast on television has to be made accessible to those with hearing loss and other disabilities if it is later streamed online. Meanwhile, Google launched a service last year that will automatically create captions for new videos when they are uploaded to YouTube.

But the new law doesn't cover videos that are made for the Web. And few YouTube users seem to know about Google's new service.

Those with hearing loss and other disabilities face plenty of other challenges with new technologies.

Cell phones, for example, tend to transmit a limited range of audio tones, making them difficult to use for those who are deaf in certain registers. And while manufacturers are required to make a certain percentage of phones that are hearing-aid compatible, it can be difficult to find out which ones are compatible - or to find retailers that carry those models.

Technology, inclusive public policies and empathetic business leaders can solve these problems. But people have to be aware of them first.

They're certainly on my radar screen now. I hope they're on yours, too.

More information: Troy Wolverton is a technology columnist for the San Jose Mercury News.