



The Windows 10 Accessibility Handbook

Supporting Windows Users with Special
Visual, Auditory, Motor, and Cognitive Needs

Making Windows easier to use for everyone

Mike Halsey

apress®

The Windows 10 Accessibility Handbook

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Special Visual, Auditory, Motor, and
Cognitive Needs



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About the Author



Mike Halsey is the author of more than a dozen books on Microsoft Windows, including many *Troubleshooting* books such as *Windows 10 Troubleshooting* (Apress, 2015). He was first awarded a Microsoft Most Valuable Professional (MVP) in 2011.

Based in Sheffield (UK), Mike gives many talks on how to get the very best from Microsoft Windows. He makes help, how-to, and support videos under the brands *PC Support.tv* and *Windows.do*. You can follow Mike on Facebook, Twitter, and YouTube by searching for *PCSupportTV*.

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Kathleen Anderson was first honored with the Microsoft MVP award in October 2001. She has worked with FrontPage since 1997 and Expression Web since Version 1, and has worked in the IT field for over 30 years. Kathleen retired from the state of Connecticut after 25 years of service, and relocated to the beach in Oak Island, North Carolina. She served as the Core-CT Webmaster (www.core-ct.state.ct.us), and chaired the Connecticut's Committee on Web Site Accessibility. She owns a web design company, Spider Web Woman Designs (www.spiderwebwoman.com). She was a technical editor on *Windows 10 Primer*, *Windows 10 Revealed*, *Microsoft Expression Web 4*

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CHAPTER 1



Introducing Accessibility in Windows 10

We've all experienced difficulty using our PCs. Whether it's losing the mouse cursor on the screen and shaking the mouse vigorously to try to find it, or squinting to read text that's too small, usability problems abound in computing. This isn't helped by the fact that as a population, we're all getting older, living longer, and increasingly looking to the Internet as a means to keep in touch with friends and family, access public services, shop, and have fun.

If you have less than perfect eyesight or hearing or your hands are a little shaky, using a PC can sometimes be a frustrating experience. Jiggle the mouse a little, and all your windows disappear from the screen. Press the Shift or Ctrl key too many times, and the entire way the keyboard works changes. Set your resolution and desktop scaling incorrectly, and finding a button or link can take forever. And not being able to hear the PC properly means you may miss an important notification.

For people with disabilities and impairments, the challenges are greater. If you can't physically see the screen, how can you do something as simple as get online? And if you're unable to use a keyboard and mouse, typing a web address can seem like a distant goal.

Microsoft Windows has long included features aimed at making your PC, laptop, tablet, and smartphone more accessible and easier to use. With Windows 10, these tools and features are mature and comprehensive, while also being straightforward for the people who need them most.

No matter what your specific situation, from color-blindness to dyslexia, poor eyesight or hearing impairments, shaky hands, poor coordination or more severe disabilities, in this book I guide you through how to make Windows 10 easy to use on whatever device you want to use it on.

If you're supporting people who find PC use difficult, this book details how to understand the needs of different types of PC users and how to set up systems to accommodate them. Using PCs may be a challenge for some, but it doesn't have to be a problem.

What Is Windows 10 Accessibility?

The *Ease of Access tools* in Windows 10 comprise a suite of utilities, each with a specific goal and aimed at solving a specific problem. These aren't just tools that always work in isolation, however, and they're not by any means the only accessibility functions available; the operating system contains utilities that might be generally considered mainstream but that can also aid accessibility considerably.

But what are the main accessibility tools in Windows 10, and what challenges are they intended to solve?

Narrator

The *Narrator* is the spoken voice of your PC, reading not just text in documents and on web pages, but also menu options, window names and features, and any other text available onscreen. It operates in several ways: it can read text automatically in a window when it opens, and you can also scan text with your mouse cursor or finger.

Magnifier

Often, people find window features, links, and buttons either too small to see or, in the case of many web pages, too faint to see. This is where the Magnifier comes in, and it too has several modes of operation. You can use it as you would move a magnifying glass across a page, or you can dock it onscreen, providing a larger, magnified view.

High-Contrast Themes

Windows 10 is designed to look aesthetically pleasing, but this doesn't always make things easy to see or help you focus on the task at hand. The high-contrast themes can create clear delimiters between open windows and dialogs and can help make everything on your screen easier to read.

Closed Captioning

You're used to being able to turn on subtitles for programs on your TV or for movies you're watching on Blu-ray or DVD. Windows 10 includes this feature, but it's not supported in all apps. The Film & TV app, however, lets you automatically turn on closed captioning for all videos that support it.

Keyboard Enhancements

Keyboards can be tricky to use sometimes, not just because keypress combinations can use two or even three keys, but also because keyboards can be quite wide. Functions exist to make it easy to use multiple-key combinations, to handle slow keypresses, and more.

Mouse Enhancements

At the beginning of this chapter, I highlighted the all-too-common case of losing the mouse cursor onscreen. We've all done it. Windows 10 includes options to prevent this from happening, making it easier to both find and follow the cursor. You can also use your keyboard's cursor keys instead of the mouse if you need to.

Concentration Enhancements

There can sometimes be a lot happening onscreen, and enhancements exist to help you focus more easily on the task at hand and concentrate on getting your work done.

Additional Enhancements

Many features are built in to Windows 10 that aren't aimed at improving accessibility but that can greatly enhance your PC's ease of use and improve your experience, such as touch zoom controls and laptop trackpad swipes.

Settings Sync

Once you have set up your PC as you want it, assuming you are signed in to Windows 10 using an account that can sync across devices—such as a Microsoft account or domain or Azure Active Directory—your accessibility settings can be set to synchronize across all the PCs you sign in to. This even includes new PCs that you haven't used before; you'll see your accessibility settings sync to those PCs shortly after you first sign in.

Who Can Benefit from Accessibility in Windows 10?

Clearly, there's a lot in Windows 10 that can be used to make your experience more enjoyable and productive. You can use some or all of these features together, and everything can be customized to your own needs—but who might benefit from such features?

Here I'm talking more to people who will be supporting users in a company environment or perhaps in their homes. There's a common misconception that the Ease of Access options in Windows 10 have been put there to make life simpler for the disabled, but this isn't actually the case.

Of course, if you are blind or physically impaired in some way, it's clear that features such as the Narrator and keyboard, mouse, and touch enhancements can help. Also, if a person has a neurological or cognitive disability, making it easier for them to focus on a task can be of enormous benefit.

It doesn't stop there, however—huge numbers of different types of people can benefit from making Windows 10 easier to use. The elderly can benefit from the ease-of-access features. This planet has an aging population, and as we get older, we tend to slow down and can find it more difficult to perform intricate tasks.

The young aren't excluded, either. Poor eyesight, color-blindness, dyslexia, hearing problems, motor difficulties, and concentration problems can hit anybody at any age. You may not think you need help or support, but that doesn't mean making things slightly bigger onscreen or using a more suitable color scheme won't help you focus more easily on your work or help you enjoy using your PC more.

Finally, there are people like me and, possibly, you, who occasionally lose the mouse cursor onscreen and find it frustrating to have to wiggle the mouse to find it again.

So who can benefit from the Ease of Access features in Windows 10? Quite literally *every single* Windows 10 user, be they on a desktop PC, laptop, tablet, or smartphone. Everyone has the potential to benefit from the Ease of Access features in some way, which makes the benefits to both individuals and businesses absolutely enormous.

Accessibility Begins at Sign-In

With Windows 10, your accessibility options begin at the sign-in screen, where you choose your user account and type your password or PIN. When you start a Windows 10 PC, the sign-in screen is the first thing to appear; refer to Figure 1-1. In the bottom-left corner of the screen, and only if you have more than one user account set up on the PC, a list of accounts is visible. In the center of the screen is (top to bottom) your user avatar (photo), your name, the account name you sign in with (such as your Microsoft Account e-mail address), a password or PIN input box, and, below that, a link to additional sign-in options if you have set them up on the PC. This can include features such as a picture password you can draw on the screen.