



What is Information Technology and How Does it Become Accessible?

Electronic and information technology (IT) consists of any device used to obtain, store or transmit data or information. This includes software applications and operating systems; web-based information and applications such as distance learning; electronic text; telephones and other telecommunications products; video equipment and videotapes, CDs and DVDs; the Internet; photocopiers and fax machines; and computer hardware.

Increasingly, technology is made using the concept of “universal design”, meaning that an item is useable by most people, with or without disabilities. For some people with disabilities, however, these technologies must be modified. This is known as accessible information technology. Some items can be manufactured as fully accessible, while others use adaptations to the item to make it accessible.

Accessible IT provides a range of options to users with a disability according to their needs and can provide solutions to barriers caused by physical, cognitive and sensory disabilities.

Accessible IT Features

Accessible software applications give users more than one way to accomplish a task. The means for displaying menus and prompts in different ways is interpreted by assistive technology. Users may use the mouse alone, the keyboard alone, or a combination of the two. Information in the form of electronic text, that which appears on the computer screen, may be conveyed through different colors and sizes. The background of the computer screen may be changed. Text may be spoken and the rate of speech adjusted. Installation instructions, user guides and other documentation are available in alternate formats, such as large print and Braille.

Accessible computer hardware allows the user to access information in a customized way, such as with a modified keyboard and/or a modified mouse in different sizes, shapes and configurations.

Voice telephones manufactured after 1996 have a volume control feature. For older telephones, amplification handsets or in-line amplifiers are available.

Interactive pagers permit users to send and receive text messages and with small thumb keyboards, allow the user to make TTY calls, use e-mail and send faxes.

Accessible multimedia products, such as those distributed on videotapes, CDs, DVDs, or the Internet, provide captioning and alternative ways to navigate the information, which may include synchronized text captions for spoken information and other audio content. Alternatively, audio descriptions can provide access to visual information. Keyboard commands may be available for all functions of the software.

Accessible web sites are designed so that all visitors can access the web site and its content, and participate in interactive web activities. Accessible web sites provide a text equivalent, typically a short description, for all non-text elements, such as video, graphics, audio, animation, graphical buttons and image maps. By adding this short description, users who cannot see the screen can access the information with a screen reader that will read the description of the picture.

Distance learning has increased in availability, allowing students to access classes via their computers at home. Web sites and technology for on-line courses must be compatible with all operating systems and web browsers.

Accessible copy machines can be operated using keypads, screen magnification, touch screens, or voice recognition. Height and position can be adjusted so that controls are within easy reach and the display can be viewed easily. Document feeders are located at desk height. Xerox Copier Assistant™ software is an example of a product designed to help people who use a wheelchair, are visually impaired, or are blind to independently make copies or program copy jobs.

Accessible fax machines are those using a computer and a software application that can read aloud a sent or received fax and allows the user to edit, print, delete, copy, forward or enlarge the fax.

For more information...

If you would like more information regarding accessible electronics and information technology, please contact the Richard West Assistive Technology Advocacy Center of Disability Rights New Jersey providing information and referral, outreach and education, technical assistance and legal and non-legal advocacy in the area of assistive technology.



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