



Assistive Technology, Accommodations, and the Americans with Disabilities Act

Employers make accommodations for all of their employees. A chair, desk, computer, lighting, and safety equipment could all be considered technology accommodations made for employees. Assistive technology is no different; it is simply any item that can assist an individual with a disability to succeed on the job. This information sheet provides some definitions and a starting point for finding the right technology to meet the needs of your employees.

What is Assistive Technology (AT)?

Assistive technology was first defined in the Technology-Related Assistance for Individuals with Disabilities Act of 1988 (P.L. 100-407) as “any item, piece of equipment, or product system, whether acquired commercially, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities.”

Examples of assistive technology devices include:

- Hearing aids
- Ramps that help people get in and around buildings more easily
- Wheelchairs
- Computer modifications to increase accessibility

- Electronic devices that make communication possible
- Equipment on the job that has been modified or customized
- Remote control devices that turn appliances, computers, lights, radio, etc. on and off
- Magnifiers, talking books, closed circuit television, Braille note-taking computer

Assistive technology services are defined as “any service that directly assists an individual with a disability in the selection, acquisition, or use of an AT device. An AT service can include: (1) evaluation of the AT needs; (2) purchasing, leasing, or acquiring the AT; (3) selecting, maintaining, repairing, or replacing AT devices; (4) coordination and

use of therapies, interventions, or services with AT devices; (5) training or technical assistance for individuals with disabilities, professionals, employers, or other individuals providing services to individuals with disabilities.” Examples of technology services include:

- Getting help to know what devices are available
- Getting help to know where to get services
- Getting help to determine what services are needed
- Getting help to pay for devices
- Getting devices repaired

Assistive technology includes devices and services that help people in their daily lives at home, work, school and the community.

How Can AT Assist in the Implementation of the ADA?

The Americans with Disabilities Act extends full civil rights and equal opportunities to people with disabilities in both the public and private sectors. Specifically, the law prohibits discrimination on the basis of a physical or mental disability in employment, public services, public accommodations, and telecommunications. Assistive technology can play a major role in helping to realize the goals of the ADA.

What Are Some Benefits of AT as it Relates to the ADA?

AT can play a critical role in complying with reasonable accommodations. Providing a reasonable accommodation to a job applicant or an employee with a disability can include the acquisition or modification of equipment or devices. Some AT accommodation examples are:

- Sally, born with cerebral palsy, uses an augmentative and alternative communication (AAC) device to talk with her fellow employees and to present speeches at conferences.
- Jason was injured in a fall and uses a wheelchair. He continues to work at his office using equipment that is set on lower worktables and has front controls.
- Marion, who sustained a head injury from a car accident, uses an electronic notebook to help her complete her day-to-day job-related tasks.

Employers may choose not to hire a qualified individual with a disability because they have a limited understanding or awareness of how the individual can perform the essential functions of the job with the use of AT. In addition, new technologies are consistently being developed, many of which include designs to accommodate individuals

with disabilities. Therefore, employers need to realize that like all workplace technology that consistently gets upgraded and improved, so, too, does AT.

AT can play a vital role in ameliorating unnecessary risks to workers. Under the ADA, employers do not have to hire or employ a person with a disability who poses a direct threat, i.e., “a significant risk to the health or safety of others that cannot be eliminated by a reasonable accommodation.” For example, a store clerk with poor upper body control might use a cart to move heavy supplies rather than carrying them across the store and risk dropping them on others. A craftsman with cerebral palsy might use a low-tech vice grip or clamp to secure and direct a variety of tools and equipment as a way of reducing the risk of injury to co-workers.

What Are Some Typical Accommodations Using AT?

A few examples of the types of AT devices and services that provide reasonable accommodations for various types of disabilities are provided below.

Blindness or Low Vision

- Optical character recognition system (also known as a scanner with speech output)

- Text-based web browser with screen reading software or Braille output
- Accessible company websites
- Large-print materials
- Audiotapes
- Qualified reader
- Braille
- Computer with voice output
- Electronic note-taker
- Screen magnification product
- CCTV (Closed Circuit Television system)
- Optical magnifier
- Large-print label
- Raised lettering on room labels

Hearing Loss or Deafness

- Certified sign language interpreter
- TTY (Teletype telephone)
- Visual or tactile pagers for communication, instructions, and as an alerting system
- Telephones with amplification devices and visual and auditory alerting systems
- Fire alarms with visual and auditory alerting systems
- Assistive listening devices (e.g., FM, infrared, loop systems, and/or closed-captioning decoders)
- Captioned video training materials
- Real-time captioning for conferences and audio streaming of web teleconferences

Mobility Impairments (Multiple Sclerosis/MS, Paraplegia, Quadriplegia, Post Polio, Carpal Tunnel Syndrome, Repetitive Stress Injuries, etc.)

- Trackball for easier mouse manipulation
- Touch screens
- Ergonomic keyboard
- Adjustable keyboard tray
- Portable cart
- Writing and grip aids
- Page turners and book holders
- Stand/lean stools
- Adjustable height desks and work tables
- Speech amplification systems

Cognitive and Developmental Disabilities (Mental retardation, autism, cerebral palsy, neurological conditions, etc.)

- Telephone auto-dialer
- Larger buttons on equipment
- Memory aids (electronic notebook, pop-up timer on computer)
- Communication device
- Voice output with optical character recognition to read documents or use a reading pen

Learning Disabilities or Attention Deficit Disorders

- Room partitions or enclosed office space to reduce noise and distractions

- Video or audio conferencing meetings

Myths About AT

There are many myths surrounding AT devices and services for individuals with disabilities. These misconceptions may impact attitudes and become invisible barriers to an individual's independence and productivity. Common misconceptions are:

An AT device is a luxury. For someone with a disability who relies on AT to perform a critical function or achieve a desired goal in life, AT is very much a necessity. A computer is a necessary piece of equipment for anyone doing data entry even though it could be done with a pencil and paper. Just because a device makes a task easier or more convenient to do, does not make it a luxury.

"For most people, technology makes things easier. For people with disabilities, however, technology makes things possible. In some cases, especially in the workplace, technology becomes the great equalizer and provides the person with a disability a level playing field on which to compete." – A quote from Mary Pat Radabaugh, a former employee with the IBM Disability Support Center.

AT is expensive and complicated. The majority of AT solutions are simple, inexpensive low-tech devices

such as a hands-free telephone, magnifiers, or wood blocks to raise the desk or workstation, which can be found at the local hardware or office supply store. It may also be as simple as rearranging a workspace.

Even though the term “undue burden” under the ADA means that providing an accommodation would result in the employer having to incur “significant difficulty or expense,” according to the Job Accommodation Network (JAN), 80 percent of the accommodations that it suggests cost less than \$500. The cost of AT can be shared by the employer, the individual, or third-party payers, such as the employer-supported health insurance for the employee, workers’ compensation, the state’s department of rehabilitation services (also known as vocational rehabilitation), philanthropic organizations, and AT loan programs. In addition, tax credits and tax deductions may also be available for providing reasonable accommodations (See the Resources section at the end of this publication).

The professional often knows best. Users of AT often have the experience and knowledge that will lead to the best solutions for their individual needs. It is important for consumers and professionals to work together to find the appropriate AT solution.

Steps to Take to Ensure Effective Use of AT Accommodations

To ensure that the appropriate reasonable accommodation will be provided, the following steps should be followed:

- Form a partnership between the employer (or service provider) and the individual with a disability.
- Focus on ability, not the disability. Focus on what the individual can do. Ask, never assume.
- Individualize solutions. Every individual’s needs are unique; therefore, the solutions must be individualized accordingly.
- Keep it simple. Simplicity minimizes cost, ease of repair, and disruption to the workplace.
- Be holistic. Look at the whole picture when considering an accommodation such as the environment, personal, and social aspects of the proposed accommodation as well as the functional aspects.

Assistive Technology Hierarchy

The following steps can serve as a guide to providing AT accommodations. The steps range from the simplest intervention to the most complex intervention:

- Use no technology – Find an alternate way to do the task. Modify or adapt the task when

possible (restructure tasks, activities, and the environment to compensate for functional limitations, including architectural modifications, attendant care arrangements, etc.)

- Use commercially available devices, equipment, and aids.
- Use commonly available devices and equipment in creative ways, such as using a wireless doorbell to signal.
- Modify existing commercial devices, equipment, and aids using easily obtainable materials such as Velcro or duct tape
- Design and fabricate custom devices, equipment, and aids.

Resources

Assistive Technology Partners
601 E. 18th Avenue, Suite 130
Denver, CO 80203
303/315-1280 Main
800/255-3477 within Colorado
303/837-8964 TTY
303/837-1208 FAX
www.assistivetechpartners.org

Global Assistive Technology
Exchange
Georgia Tech Center for AT
490 10th Street, NW
Atlanta, GA 30332-0156
800/726-9119 Main
404/894-9320 FAX
www.assistivetech.net

Job Accommodation Network (JAN)

West Virginia University
P.O. Box 6080
Morgantown, WV 26506-6080
800/526-7234
www.jan.wvu.edu

Office of Disability Employment
Policy – U.S. Department of Labor
1331 F Street NW, Suite 300
Washington, DC 20004
202/376-6200 Voice
202/376-6205 TTY
202/376-6219 FAX
www.dol.gov/dol/odep

Rocky Mountain Disability and
Business Technical Assistance
Center
3630 Sinton Road, #103
Colorado Springs, CO 80907
800/949-4232 Voice/TTY
719/444-0269 FAX
www.ada-infonet.org

Tech Connections
490 10th Street NW
Atlanta, GA 30318
877/835-7335 Voice/TTY
404/385-0641 FAX
www.techconnections.org

U.S. Equal Employment Opportunity
Commission (EEOC)
800/669- EEOC Voice
800/800-3302 TTY
www.eeoc.gov

**For more information contact:
Assistive Technology Partners
601 East 18th Avenue, Suite 130
Denver, CO 80203**

**303.315.1280 office
303.837.1208 fax
303.837.3477 TTY
800.255.3477 toll free**

**generalinfo@at-partners.org
www.assistivetechologypartners.org**

This publication may be reproduced without the written permission of ATP
provided that the source is appropriately credited.