

Assistive
Technology
Works!



Family Information Guide to Assistive Technology



**Family Center
on Technology
and Disability**

www.fctd.info

About the Family Center on Technology and Disability

The Family Center (FCTD) produces and distributes a range of informational resources on the subject of assistive technology. The Center's goal is to strengthen the ability of organizations throughout the country to provide current, accurate, and useful materials to the families of children with disabilities.

Among the resources provided by the Family Center are the following:

- A fully searchable database of more than 600 abstracts of books, articles, videos, websites, and other resources concerning assistive technology
- A fully searchable database of information on approximately 1,500 organizations nationwide, that serve the disability community
- Monthly thematic newsletters on AT topics, featuring in-depth interviews with nationally-recognized experts
- Month-long online discussions of AT topics, moderated by national experts
- An annual Online Summer Institute on Assistive Technology, for which participants may receive continuing education units
- Two *Assistive Technology Resources* CD-ROMs produced annually
- A fully accessible website that provides the resources above plus an AT glossary, an introductory AT primer, AT success stories, an explanation of relevant legislation, and links to other relevant material

The Family Center is administered by the Academy for Educational Development in partnership with the Parent Advocacy Coalition for Educational Rights, the Alliance for Technology Access, InfoUse, and the Center for Assistive Technology and Environmental Access. The Family Center is funded by the U.S. Department of Education's Office of Special Education Programs (OSEP).

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InfoUse



**Alliance for
Technology
Access**



Family Information Guide to Assistive Technology



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How to Use this Guide

The FCTD Family Guide to Assistive Technology includes the following sections:

- ▶ The Possibilities of Assistive Technology (AT)
- ▶ Assistive Technology in Schools
- ▶ Funding AT
- ▶ Quick Questions and Tips
- ▶ Glossary of AT Terms and Definitions
- ▶ Additional AT Information Resources

We have included many website addresses in the guide. To keep you from having to search within an organization's website for a particular piece of information, we've included the URL (the address) that will take you to the precise page within the website. That means that the URL may seem very long. Please don't let that stop you. On our website, the addresses are "hot links" so that you merely have to click on them. In the paper version, of course, that's not possible. To access the reference, type the URL into the address window of your Internet browser. Or visit our website at <http://www.fctd.info> and use the online Family Information Guide.

The information in the guide is accurate and current as of February 2005. You may copy and distribute portions of the guide without prior consent. Of course, we would appreciate it if you would give appropriate attribution to the Family Center on Technology and Disability. Products that are identified in the guide are meant only as examples. The Family Center and the U.S. Department of Education do not endorse specific products. There are many other fine AT devices available in addition to those pictured or discussed here.

The Family Center is always trying to improve the quality of the AT information materials that we produce. You can help us better serve you by completing the short and easy evaluation form that can be found on our website. We would happy to mail a printed evaluation form to you if you prefer.

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Section 1:

The Possibilities of Assistive Technology

The Possibilities of Assistive Technology

More than ever before, technology makes it possible for children with disabilities to lead independent and fulfilling lives.

For example, a young girl who is unable to speak can communicate with family and friends using a portable electronic device that “speaks” for her; a boy with a physical disability can use his electric wheelchair to participate in sports; and a young adult with a learning disability can compose a school report with the help of a computer.

Parents may have seen or heard about this type of technology and wondered how it might help their children. This equipment is frequently called “assistive technology.” Assistive technology (AT) helps a person with a disability do something s/he otherwise cannot to

do. Assistive technology can be anything from a simple device, such as a magnifying glass, to a complex device, such as a computerized communication system.

The term “assistive technology” comes from several laws that address the needs of people with disabilities. Assistive technology includes both the devices and the services needed to use the devices effectively. AT services might include assessing a child’s need for AT and the training the child and his teacher, aide, and family to use the AT.

How Can Assistive Technology Help My Child?

The potential of technology to help children with disabilities is tremendous. Assistive technology can help children be more self-sufficient at home and in school, communicate with friends and family, get out into the community, and as they grow older, find employment. The story on page 4 illustrates how assistive technology can play a key role in the life of a child with a disability.



How Do I Determine What Type of Technology My Child Needs?

The process of choosing assistive technology for your child usually starts with an evaluation of your child's AT needs. The evaluation can be conducted by the school, an independent agency, or an individual consultant. Because the scope of assistive technology is so large, the evaluation will most likely have a focus. For example, an AT evaluation conducted by the school is directly related to achieving educational goals and outcomes.

Every AT evaluation should address what the child is having difficulty doing. For example, if a child is having difficulty with mobility, the evaluation would focus on technology to assist with that, such as a wheelchair or scooter.

During the evaluation it is important to talk about your child's strengths in addition to his challenges. For example: "What does he do well?" "What does he enjoy doing?" This type of input will provide clues as to what type of technology might work, and how well your child will respond to it.



It is also important to consider the different environments in which your child interacts with others – at home, school, and in the community. Think about how your child's needs for assistive technology might be different on the playground, the classroom, at a friend's house, or at a public place, such as a library or mall.

An AT evaluation will result in a recommendation for specific devices and services, including any modifications to the child's environments. Long-term success with AT involves an ongoing look at need, equipment trial and evaluation followed by maintenance and growing expertise by the user, family, and professionals. It is important to remember that AT needs usually change with time, circumstances, and goals.



Meet Freddie...

Freddie is a 21-year-old young adult with spina bifida and multiple health impairments. Since he was a small child, Freddie's disabilities have severely limited his functional abilities, particularly his mobility and speech. Because of Freddie's many needs, he has relied heavily on different types of assistive technology throughout his life. His mother, Deborah, says that without AT he would not be able to live at home, attend school, go out in the community, or be employed.

Technology for Communication

Freddie was assessed for a communication device when he was in kindergarten because his speech was difficult to understand. Since then, he has used many different communication tools, and he currently uses a computerized communication device that helps him talk with others in different situations.

Technology for Mobility

Since Freddie was 2 years old he has used a wheelchair to get around at home and at school. In first grade he began to use a power wheelchair that he controlled with a joystick. The power wheelchair gave him greater freedom and now he uses it to travel throughout the community independently.

Technology for Education

Freddie also has limited use of his arms, so he cannot hold a book to read, or a pencil to write. Because of these limitations, he has used books on tape and talking computer books to help him learn to read and write. He has also used the computer to type his writing assignments for school.

Technology for Work

As a young adult, Freddie has found computer-related employment, using a computer with adaptive devices such as a trackball mouse and special software for typing.

Technology for Social and Leisure Activities

For social interaction, Freddie has been able to use e-mail and the Internet to stay connected with friends and family and to keep up with current events. He also uses the computer for recreational activities, such as listening to CDs or watching videos. Freddie's mother feels that the computer has been "the most important piece of assistive technology" in his life because it provides a vital connection with the rest of the world.

Not every child will need as much assistive technology as Freddie uses, but AT can help many children with different needs realize their potential. Assistive technology can include adapted toys, handheld dictionaries, computers, powered mobility, augmentative communication devices, special switches, and thousands of commercially available or adapted tools to assist an individual with daily living activities.

Learning About Assistive Technology

Parents can help to identify potential AT for their children if they learn more about the choices that are available. Speech-language therapists, occupational therapists and school professionals are often a good starting point. You may not be aware, however, of the many other organizations that provide AT information and training, such as parent training and information centers (PTIs), community technology centers, state assistive technology programs, and rehabilitation centers. The Family Center on Technology and Disability (FCTD) is funded by the U.S. Department of Education to make available a wide range of AT resources to people and organizations that work with families. Families are always welcome to visit the FCTD's website at www.fctd.info to find organizations to work with and to learn more about assistive technology. See the Resource Section of this guide for more information about locating such centers and programs.

If possible, you should visit an assistive technology center with your child to see and try out various devices and equipment. Some AT centers offer a lending program that enables families to borrow devices for a trial period. Parents can seek out AT workshops, trainings, and conferences and there are many opportunities to learn about AT on the Internet as well.

[Site Map](#) | [Contact Us](#) | Search:



The Family Center on Technology and Disability

Assistive Technology Works!

- About FCTD
- AT Resources
- AT Organizations
- Monthly Newsletters
- Online Discussions
- AT Success Stories
- AT Terms and Laws
- Links to Useful Sites



Monthly Features:

- The discussions and resources produced during our 2004 Summer Institute on Assistive Technology are now available on CD-ROM. [Request a free copy here.](#)
- Our December newsletter - [Sunrise, No Sunset - The New Assistive Technology Act](#) is now available. In this issue, Deborah Buck, Executive Director of the Association of Assistive Technology Act Programs, explains the implications of the new law.
- Join our January discussion of "Family and Cultural Issues in the Delivery of AT Services" led by national expert **Dr. Phil Parette** and very knowledgeable parent, **Tom Nurse**. You can sign in as yourself or as a guest; there is no password required. We look forward to a great discussion!



- ★ [Join the FCTD Network! Sign up here to become a member.](#)
- ★ [Meet Alan Brint and learn about his successful use of assistive technology.](#)



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Meet Trey...

Trey, now 8-years-old, was born with Down syndrome and numerous other health problems. He hasn't talked since he was born. Because Trey was unable to communicate his needs and wants he often became very frustrated and then acted out by yelling and throwing things. When Trey was 3 years old, his parents decided to have him evaluated by a communication specialist in their school district. The evaluation determined that Trey could benefit from having a communication device to help him express his needs and communicate with others, but she suggested a trial with a couple devices to find out which worked best for Trey and his family.

Lisa and Stephen, Trey's parents, were unfamiliar with communication technology, but the school specialist helped them learn about the different devices that they would try with Trey at home and at school. For several weeks the family tried a simple voice output device with six messages, which led the parents and the specialist to realize Trey's vocabulary would very quickly outgrow that particular device. In the end, they decided on a 32-message device with multiple recording levels. This product, called "Tech Speak," became Trey's first communication device. Soon Trey was able to activate buttons to form simple requests, such as "I want crackers."

"Finding the right technology for Trey is an ongoing process and not always easy. I encourage parents to try out different devices with their child at home and school before settling on one device. It's been invaluable for me to link up with a parent advocacy organization and support groups to learn about the technology available, but more importantly to learn advocacy skills that have helped me get the technology Trey needs."

-- Lisa, Trey's mother



The following pages describe a number of common assistive technology options in different goal areas. This is only a brainstorming list and is not intended to be comprehensive. Check the "Glossary" for any words and terms that are not familiar to you.

Aids for Daily Living

► Eating

- ___ Adapted utensils/plates
- ___ Arm support
- ___ Automated feeding

► Dressing

- ___ Velcro fasteners
- ___ Button hook
- ___ Dressing aids

► Recreation & Leisure

- ___ Adapted toys and games (e.g., puzzles with handles)
- ___ Battery interrupters and switches
- ___ Adapted sporting equipment (e.g., Velcro mitt, lighted or beeper ball)
- ___ Universal cuff to hold crayons, markers, paint brush
- ___ Modified utensils (e.g., rollers, stampers, scissors)
- ___ Articulated forearm support (e.g., ErgoRest)
- ___ Drawing/graphics computer programs
- ___ Music or games on the computer

► Home Living

- ___ Switch
- ___ Battery interrupter
- ___ Control unit
- ___ infrared sender / receiver
- ___ X-10 unit and peripherals

Studying/Reading/Math

► Learning /Studying

- ___ Print or picture schedule
- ___ Low tech aids to find materials (e.g., color tabs, colored paper or folders)
- ___ Highlight text (e.g., markers, highlight tape, ruler)
- ___ Voice output reminders for tasks, assignments, steps to tasks
- ___ Software for manipulation of objects/concept development (e.g., Blocks in Motion, Thinking Things)- may use alternate input device such as Touch Window
- ___ Software for organization of ideas and studying (e.g., PowerPoint, Inspiration, ClarisWorks Outline)

► Reading

- ___ Changes in text size/space/color/background color
- ___ Book adapted for page turning (e.g. with page fluffers, 3-ring binder and folders)
- ___ Use of pictures with text (e.g., Picture It, PixWriter)
- ___ Talking electronic devices for single words (e.g., Reading pen, Franklin Bookman)
- ___ Scanner with OCR and talking word processor
- ___ Electronic Books (e.g., Start to Finish)

► Math

- ___ Abacus, math line
- ___ Calculator/calculator with print out
- ___ Talking calculator
- ___ Calculator with large keys, large display
- ___ On-screen calculator
- ___ Software with cueing for math computations
- ___ Tactile/voice output measuring devices (e.g. clock, ruler)

► Alternate Computer Access

- ___ Keyboard with easy access or accessibility options
- ___ Word prediction, word completion, macros, abbreviation expansion to reduce keystrokes
- ___ Keyguard
- ___ Alternate mouse
(e.g., *TouchWindow, trackball, trackpad, mouse pen*)
- ___ Mouse alternative with on-screen keyboard
- ___ Alternate keyboard
(e.g., *Intellikeys, Discover Board, Tash*)
- ___ Mouth stick, head pointer with keyboard
- ___ Switch with Morse code
- ___ Switch with scanning
- ___ Voice recognition software and hardware

Composing Written Material

- ___ Word cards, word book, word wall
- ___ Pocket dictionary, thesaurus
- ___ Electronic dictionary/ spell check
(e.g., *Franklin Spelling Ace*)
- ___ Word processor with word prediction
(e.g., *Co:Writer or Word Q*) to facilitate spelling and sentence construction)
- ___ Multimedia software for production of ideas
(e.g., *PowerPoint, Overlay Maker w/ talking word processor*)
- ___ Voice recognition software

► Mechanics of Writing

- ___ Pencil/pen with adapted grip
- ___ Adapted paper
(e.g., *raised lines, highlighted lines*)
- ___ Slantboard
- ___ Typewriter
- ___ Portable word processor
- ___ Computer

Communication

- ___ Communication book / board
- ___ Eye gaze board
- ___ Simple voice output product
(e.g., *Big Mack, CheapTalk, Talking Picture Frame*)
- ___ Voice output device with levels
(e.g., *Macaw, CheapTalk with Levels, Dynavox*)
- ___ Voice output with icon sequencing
(e.g., *AlphaTalker, Vanguard, Liberator*)
- ___ Voice output with dynamic display
(e.g., *Dynavox, laptop with Speaking Dynamically*)
- ___ Device with speech output for typing
(e.g., *LinkPLUS, Write:Out Loud with laptop*)

Transition

► Work/School to Work

- ___ Scheduling aids (*calendars, reminders, task analysis*)
- ___ Switch/device
- ___ Adapted keyboard
- ___ Communication aid
- ___ Keyboard emulator

► Adaptations

- ___ Adaptive seating/positioning
- ___ Electronic communication
- ___ Electronic organizers
- ___ Adapted computer input
- ___ Environmental control units



Section 2:

Assistive Technology in Schools

Assistive Technology in Schools

Assistive Technology in Public Education

Jonathan is a 5th grader with a physical disability that makes it difficult for him to write by hand. He does much better using a portable word processor that the school provides for him as part of his special education program. Jonathan uses the device to take notes in class and to complete all of his written work. He even takes it home with him to complete his homework assignments. The portable word processor has helped Jonathan keep up with his school work and maintain a B+ average.



The portable word processor is an AT device that Jonathan's Individualized Education Program (IEP) team determined was necessary for him to fulfill his educational goals. Without it he would not be able to keep up with the rest of his class and would be dependent on others to help him complete his school work.

Jonathan's story is a good example of how assistive technology at school empowers students with disabilities and encourages academic success. Unfortunately, it is not always easy to obtain the technology for school use, and parents may not know enough about AT devices and services to ask the right questions.

This section of the Family Information Guide provides resources and information about assistive technology for use in school. It discusses:

- ▶ Laws that require assistive technology to be considered for students receiving special education services
- ▶ How to work with the school to determine your child's AT needs
- ▶ Where to find information about AT devices and services for school use

There may be terms in this discussion with which you are unfamiliar, such as "least restrictive environment," "mediation," or "due process hearing." Please refer to the guide's glossary for definitions of these and other terms as they are used in the context of assistive technology.





Understanding the Law and Assistive Technology

It is important for parents to understand how laws impact their child's right to receive AT services at school. The **Individuals with Disabilities Education Act (IDEA)** requires public schools to make available to all "eligible" children with disabilities a "free appropriate public education" (FAPE). To determine if they are eligible for special education services, students must be evaluated. A parent, teacher or related service provider, such as a therapist, can ask for a special education evaluation. The school system must provide the evaluation at no cost to the family. If the student is found to be eligible, then special education services must be made available to the student at no additional cost to families. A family should not wait until a child is ready to enter first grade to begin the evaluation process. IDEA has two parts:

Part B applies to children with disabilities from three to twenty two years old. Part C applies to infants and toddlers - from birth to three years old.

The law requires that public schools develop Individualized Education Programs (IEPs) for each eligible child with a disability. The specific special education services, including assistive technology, that are outlined in the IEP should reflect the individual needs of the student. IDEA requires that particular procedures be followed in the development of the IEP. Each student's IEP must be developed by a team of knowledgeable persons and must be reviewed at least once a year. The team usually includes the child's teacher, the parents, the child,

When AT is included in an IEP,
it is the school's responsibility
to make sure it is provided.

if appropriate, a school system representative who is qualified to provide or supervise the special education services, and other individuals at the parents' or school's request. As their child's strongest advocate, families should insist, politely but strongly, that assistive technology be considered in the IEP process and that both AT devices and services - such as teacher training on AT equipment - be included in the written IEP if needed to receive FAPE. When AT is included in an IEP it is the school's responsibility to make sure it is provided.

If parents disagree with the proposed IEP, they can request a due process hearing and a review from the state educational agency if applicable in that state. They also can appeal the state agency's decision to state or federal court. Read more about the IEP process on page 12.

You can find more information about IDEA and recent changes in the law at:

- ▶ <http://www.ed.gov/offices/OSERS/Policy/IDEA/index.html>
- ▶ http://www.cec.sped.org/law_res/doc/law/index.php
- ▶ <http://www.usdoj.gov/crt/ada/cguide.htm#anchor62335>

Department of Education
Council for Exceptional Children
Department of Justice

Section 504 of the Rehabilitation Act is a federal civil rights law that prohibits discrimination against individuals with disabilities. Section 504 affects all programs that receive federal funds, including public schools. The law states that students with disabilities must be given the same opportunities to participate in educational programs and activities as students without disabilities, and the use of assistive technology may be considered as an accommodation. Therefore, even if a child does not meet special education criteria, it is sometimes possible to acquire needed devices through a 504 Plan. For example, a student with poor handwriting due to impaired fine motor skills may be given access to a computer to complete written assignments. Section 504 does not require school districts to develop an IEP for students. However, the district should document in a written 504 Plan what evaluations were performed and what decisions were made regarding the student.

You can find more information about Section 504 of the Rehabilitation Act at:

- ▶ <http://www.section508.gov/index.cfm?FuseAction=Content&ID=12>
- ▶ <http://www.ataporg.org/itqa.asp>

Your Child's Individualized Education Program (IEP) and Consideration of Assistive Technology

As mentioned above, IDEA requires that children with disabilities have an Individualized Education Program (IEP). The IEP is a written plan for educating a child with a disability. The IEP describes the educational program and services that the IEP team feels will meet your child's specific needs, such as school placement, services, and equipment.

A number of states have posted online guides to the IEP process. Examples include:

- | | |
|---|---|
| ▶ Nebraska's <i>IEP Technical Assistance Guide</i> : | http://www.nde.state.ne.us/SPED/iepproj/ |
| ▶ Wisconsin's <i>A Guide for Writing IEPs</i> : | http://www.dpi.state.wi.us/dpi/dlse/een/pdf/iepguide.pdf |
| ▶ Massachusetts' <i>IEP Process Guide</i> : | http://www.doe.mass.edu/sped/iep/proguide.pdf |
| ▶ North Dakota's <i>IEP Planning Process</i> : | http://www.dpi.state.nd.us/speced1/laws/iep/IEP_Guide.pdf |
| ▶ New York's <i>Guide to Quality IEP Development and Implementation</i> : | http://www.p12.nysed.gov/specialed/publications/iepguidance/IEPgideDec2010.pdf |



Consideration of Your Child's Assistive Technology Needs

What does "consideration" of assistive technology mean? Although the process of "consideration" is not defined by the IDEA law, in general, it should be more than just checking a box on a form that states that the AT needs of your child have been considered. Although there is no single approach to considering your child's AT needs, most IEP teams will follow a process that takes the following steps:

1. Gather information about your child, his/her disability and abilities and ask the following questions.
 - ☐ What does your child need to do but is unable to do because of his/her disability?
 - ☐ What are your child's customary environments? These environments include the classroom, the playground, bus, music, gym, and lunch periods.
2. Share information gathered about your child. Parental input is very important and you should be actively involved in the process.
3. Remember that your child's preferences in areas such as color and style are important things to consider. Many parents tell stories of successful AT adoption that hinged on a child's sense that a particular piece of equipment was "cool." Likewise, a child may resist using a piece of equipment that he thinks is "nerdy" and sets him apart from the rest of his class. Children want to fit in with their peers, so a device that is less conspicuous than another might be preferred even if it has fewer "bells and whistles."

IDEA law and Assistive Technology

- ▶ Your child's assistive technology needs must be considered.
- ▶ If necessary, an AT evaluation must be performed
- ▶ AT devices and/or services must be provided by the school system if identified in the child's IEP.
- ▶ Training of teachers, aides, and the student may be listed in the IEP as "AT services"



4. Make a list of the child's needs, environments, and tasks, and prioritize your child's biggest educational challenges, such as communication, mobility, reading, writing, or behavior issues. Questions to discuss with the IEP team:
 - ☐ What are the biggest challenges for my child?
 - ☐ Which challenge should we focus on first?
5. The IEP team brainstorms possible solutions to your child's main goals. Questions to ask include:
 - ☐ What assistive technology tools are available to help my child overcome these challenges?
 - ☐ What criteria will be used to determine if the AT has been successful in reaching the agreed-upon goals?
6. After listing possible AT tools that the team thinks might help your child achieve her goal, the team needs to decide which device they will try first. Sometimes a number of different AT tools will need to be tried before an appropriate one is found for your child. The IEP team should discuss:
 - ☐ What are the specific features of the AT device that can help your child?
 - ☐ What tools are readily available from the school, the district or a loan library?
 - ☐ Who will need to be trained to get maximum benefit from the AT device or service? What are the sources of training?
7. After deciding upon a device to try, the IEP team needs to acquire the device for the student to experiment with. Some schools have access to libraries of technology that are shared among schools or districts.

During the trial period with the device, IEP team members need to collect data about the child's use of the device.

Questions to ask include:

- ☐ How often did the child use the device?
- ☐ Did it help him do something he could not do before?
- ☐ How was success with the device measured?

The term "assistive technology" may never appear on the IEP forms used by your child's school. Instead, the form may use terms such as "accommodations, supports, program modifications, or supplementary aids and services."

No matter what form is used by the IEP team in your child's school, the team is required by law to consider your child's need for assistive technology.

Sometimes a child may need to experiment with several devices before the team can decide which device has the features your child needs. After trying different devices and collecting data about which device worked best for the child, the IEP team should come to a conclusion about which device is most appropriate for the child.

- ☐ At the end of the consideration process, the IEP team should decide whether or not the assistive technology would benefit your child.
- ☐ **It is important to document in writing that the IEP team considered AT and if so, what AT devices and services are most appropriate for the child. Assistive technology devices and/or services must be provided if required in the child's IEP.**

Keep in mind that even if your child does not require assistive technology at the moment, he or she may benefit from using it in the future. Therefore, the law requires that your child's AT needs be considered continually as long as your child has an IEP. More information on the general IEP process is available through the National Dissemination Center for Children with Disabilities (NICHCY) at <http://nichcy.org/schoolage/iep>. The Parent Advocacy Coalition for Educational Rights (PACER Center) also has tips on making the IEP process successful at <http://www.pacer.org/parent/iep.htm>.



Obtaining a Formal Assistive Technology Evaluation for Your Child

If the IEP team is unable to determine what AT devices and services are best for your child, then a formal AT evaluation may be needed. The evaluation should be performed by a qualified professional in a timely fashion. This may present a problem, as there is a shortage of qualified AT evaluators in many areas of the country. The school system may choose to use its own personnel to conduct the evaluation, but if parents disagree with the recommendations, they have the right to an independent evaluation at district expense. Be aware, however, that parents may have to assume the cost of an independent evaluation if the results do not differ from the one provided by the school system and if the system can show that the original evaluation was appropriate.



Disagreeing with the school about assistive technology

You have the right to disagree with the school's decisions concerning assistive technology. Some situations in which parents and school personnel should meet to resolve disagreements include when:

- ▶ You disagree in writing with the IEP
- ▶ You believe your child is not receiving appropriate assistive technology devices and/or services
- ▶ You think additional devices and/or services are needed

When differences arise, try to resolve them informally first. If you can't work out a solution that is satisfactory, you can take more formal steps to reach a satisfactory resolution. The procedures for taking more formal action vary from state to state, but may include mediation, a due process hearing, or filing a formal complaint with the state.

You can get state-specific information from the Consortium for Appropriate Dispute Resolution in Special Education (CADRE) at <http://www.directionservice.org/cadre/index.cfm>. You can also contact a Parent Training and Information Center, a Parent Advocacy Center, a Tech Act Center, or an Alliance for Technology Access Center (in some cases, these will be the same organization). For contact information, you can use the Family Center's searchable database. Click on your state and "information center" and/or "advocacy center."

Search Member Organizations

States: Check all that Apply

- ☐ All States
☐ Alabama
☐ Alaska
☐ Arizona
☒ Arkansas
☒ California
☐ Colorado
☐ Connecticut
☐ Delaware
☐ Florida
☐ Georgia
☐ Hawaii
☐ Idaho
☐ Illinois
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☐ Nevada
☐ New Hampshire
☐ New Jersey
☐ New Mexico
☐ New York
☐ North Carolina
☐ North Dakota
☐ Ohio
☐ Oklahoma
☐ Oregon
☐ Pennsylvania
☐ Rhode Island
☐ South Carolina
☐ South Dakota
☐ Tennessee
☐ Texas
☐ Utah
☐ Vermont
☐ Virginia
☐ Washington
☐ Washington, DC
☐ West Virginia
☐ Wisconsin
☐ Wyoming
☐ American Samoa
☐ Federated States of Micronesia
☐ Guam
☐ Marshall Islands
☐ Northern Mariana Islands
☐ Palau
☐ Puerto Rico
☐ U.S. Virgin Islands
☐ International

Organization Types: Check all that Apply

- ☐ All Organization Types
☒ Advocacy and Law
☒ Assistive Technology
☐ Disability/Disorder Specific
☐ Federal Agencies
☐ General
☐ Independent and Community Living
☐ Information Centers
☐ National Organizations and Associations
☐ Parent/Family Support
☐ Private Sector Companies
☐ Schools and School Districts
☐ State and Local Agencies
☐ State and Local Organizations
☐ United Cerebral Palsy Affiliates
☐ University-Affiliated Programs

Disability Categories: Check all that Apply

- ☒ All Disabilities
☐ ADHD/ADD
☐ Apraxia of Speech
☐ Autism
☐ Bipolar Disorder
☐ Brain Injury and Stroke
☐ Cerebral Palsy
☐ Communication and Speech
☐ Cystic Fibrosis
☐ Deaf / Blind
☐ Developmental Disabilities
☐ Dyslexia
☐ Epilepsy
☐ General / Non-disability Specific
☐ Health Impairments
☐ Hearing Impairments / Deaf
☐ Learning Disabilities
☐ Leukemia
☐ Mental Health Impairments
☐ Mental Retardation
☐ Mobility Impaired
☐ Multiple Disabilities
☐ Multiple Sclerosis
☐ Muscular Dystrophy
☐ Neurological Disorders
☐ Orthopedically Impaired
☐ Spina Bifida
☐ Tourette Syndrome
☐ Visual Impairment / Blind

Search Results

Your search returned 43 results

- AbleNet, Inc.
- AbleProject
- Access Ingenuity
- Adaptive Computer Empowerment Services
- Alliance for Technology Access (ATA)
- American Thermoflex Corporation (ATC)
- Assistive Technology of Minnesota
- A.T. KATTER and Company, Technology and Service for People with Disabilities
- AT Network
- California Department of Rehabilitation-Sacramento District
- California State University Northridge: Center on Disabilities
- Center for Accessible Technology
- Closing the Gap
- Community Research for Assistive Technology
- ComputerMentor
- Computer Access Center
- Courage Center
- Disabled Resources Center, Inc.
- Discapitados Abriendo Caminos
- DRAIL (The Disability Resource Agency for Independent Living)
- Equal Access to Software and Information (EASI)
- Family Resource Library and Assistive Technology Center
- Heads up... The Flexible Head Support System
- Loving Your Disabled Child
- Midwest Center for Postsecondary Outreach
- Minnesota Department of Children, Families and Learning: Special Education
- Minnesota Special Education Mediation Services
- Minnesota Star Program
- Northeast Regional Resource Center
- Pacific Americans with Disabilities Act and Accessible Information Technology Center
- People Achieving Change Through Technology (an Ability Building Center Program)
- Project LIT (Literacy Instruction Through Technology)
- SAC Assistive Technology
- Sacramento Center for Assistive Technology
- Sensory Access Foundation
- Shere's Inspiration
- STAR (System of Technology to Achieve Results)
- Sweetwater Union High School District: Student Support Services
- Technical Assistance Alliance for Parent Centers
- The Rehabilitation Engineering Program at Rancho Los Amigos National Rehabilitation Center
- Tripod Captioned Films
- Western Region Outreach Center & Consortia
- Willow Tree Teaching Tools



Family Resource Library and Assistive Technology Center

1000 South Fremont Ave.; Suite 6050, Unit 35
 Alhambra, CA 91803
 Phone: (626) 300-9171 (562) 906-1141
 Fax: (626) 300-9164
<http://www.eiafrc.org/>
 For more information, contact Juanita at info@eiafrc.org

The Family Resource Library and Assistive Technology Center is committed to empowering individuals with developmental disabilities and their families by providing support, information and training in a way that is family centered and culturally sensitive. It is the vision of the center to give individuals the tools necessary for the challenge of life long learning, growth and personal development. The center will provide leadership and education to foster inclusion and acceptance of individuals with disabilities.

A Parent's Perspective

"I thought my son Jared, who is blind, would benefit from a computer at school equipped with a screen reader so he could go to the computer lab to do Web-based assignments and other homework with his classmates. I called the school to set up an IEP meeting to discuss the idea with the team. When we met, Jared's teachers agreed that a screen reader could help Jared access online curricula and participate in group projects, but they weren't sure which one was the best. As a team, we decided that Jared should have an assistive technology evaluation to identify the most appropriate AT for his needs.

The evaluation was performed a month later by a vision specialist within the school district. The specialist suggested that Jared try two different programs over a two-month period to find out which one worked best for him. I was very glad to see that the specialist wanted Jared's input in the decision. Jared was trained by the vision specialist to use both of the programs over the next few months.

At the end of the trial period it was clear which program worked best for Jared. The IEP team agreed and the school purchased the software and made it available to Jared in the computer lab. Jared also received additional training from the vision specialist on the software until he could use it independently.

The process took a lot longer than I hoped it would, but in the end, I was very happy that Jared had the assistive technology he needed and would no longer be left out of computer activities at school."





Section 3: Funding Assistive Technology



Funding AT

Assistive technology may unlock the door to your child's potential, but actually getting the technology may not be easy. It takes persistence to find the appropriate equipment and services and to figure out ways to pay for them.

As a parent, you have a much better chance of getting what is needed if you and your child are involved in selecting the technology and planning for its use. While acquiring funding can be a lengthy and challenging process, there are funding sources available to help pay for AT devices and many tools and resources that can make the funding process easier. Often, assistive technology is paid for by large programs, such as special education or medical insurance. Many parents, through persistence, assertiveness, and imagination have found funding in other creative ways as well.

The goals for the technology will determine the selection of equipment and prioritizing of potential funding sources. You will find it useful to begin collecting information on all potential sources, as early as possible. Generally speaking, funding sources can be organized according to their criteria, which may include:

- The individual's purpose for using the technology (such as vocational, educational, communication, medical care, or quality of life and independent living)
- The nature of the equipment
- The individual's age
- Location - many foundations focus on specific states, cities, and communities
- Financial circumstances

Companies that sell AT devices may be an excellent source of funding information. Often such companies produce funding guides and/or have funding specialists on staff to work with you.

Government Funding for AT

Special education, vocational rehabilitation, and Medicaid are the three largest government programs through which many children and adults qualify for AT devices and services. The services and funding provided by these programs are available to those who meet the programs' specific eligibility requirements. Saying someone is entitled to services, however, is not saying what those services will be. Services vary according to decisions made by individual states in implementing the program, availability of funds, and individualized assessments of need and potential. For example,

your child might be receiving Medicaid but may not be entitled to a particular medical procedure unless your state provides it and it is deemed “medically necessary.”

Many funding programs use “means testing,” which is a way of determining eligibility for a program or service based upon income, resources, or other measures of individual or family economic status. Within the means test, however, some things may be exempt (they can not be counted as part of your family’s resources). Until you know exactly what goes into a particular agency’s calculations for the means test, you should assume you are eligible.

Meet Michael...

Michael is a typical 11-year-old boy who loves fishing and listening to the Back Street Boys. Michael also has cerebral palsy and has multiple needs for assistive technology to help him communicate, participate at school and just have fun.

It’s been a long haul to select and fund the right technology for Michael’s complex needs. Michael first tried a computer at a local technology center when he was just 4 years old; he’s now 17. For the last couple of years, Michael, his family and school have been trying and evaluating different systems with the potential to help him. They finally settled on a specific computer from a national, online vendor. Michael uses proximity switches on his electric wheelchair to operate the computer with his head. His mom, Cathy, did much of the research to find the system. She talked with professionals, explored information via the Internet, and tried equipment at workshops and conferences.

Funding the equipment was the family’s big challenge. Michael’s system cost approximately \$14,000, including the computer, software, mounting system, and switches. The Mannings were able to obtain funding for the computer, software, and wireless Internet access through Michael’s Home and Community Based Waiver*. The family also explored using their private health insurance, which would pay for part of the device because Michael uses it to communicate. Cathy recommends taking the time necessary to select and try technology before applying for funding. She said the equipment trials really allowed Michael to learn the system, so she and the school could make an educated evaluation. It normally takes a year to apply for waiver funds, so being sure about your technology choices is critical.

*Traditional Medicaid is a durable medical equipment reimbursement program and waivers can provide for the broader range of AT options which might include home modifications or other things outside the traditional Medicaid program. Waivers are determined for specific disabilities (i.e., mental retardation, developmental disabilities, autism) as determined by an individual state. Services can be identified within a waiver plan that go beyond the traditional Medicaid services provided in a state. Assistive technology can be considered one of these reimbursable AT devices and services.

Special Education

As noted in Section 2, a Federal law, the **Individuals with Disabilities Education Act (IDEA)**, states that students with disabilities are entitled to a “free and appropriate public education” (FAPE). To meet the law's requirements, many schools created special education programs. It is through these programs that children with disabilities may be eligible for assistive technology funding.

The first step in the process of qualifying for special education is for a child to be referred for screening and evaluation. Anyone can initiate the referral, but it's usually started by a parent, teacher, or related service provider, such as a therapist. Based on the results of the screening and evaluation, a decision is made about the need for special education services. If a child qualifies, an Individualized Education Program (IEP) team convenes to determine the needs of the child, including school placement, services, and AT equipment. The IEP team members include the child's parents, at least one teacher, who may be a general or special education teacher, at least one administrative staff person, and the child when appropriate. In the IEP, the team documents the child's needs and establishes a plan for working toward agreed-upon educational objectives. If the IEP team meets to plan post-high school transition, the child must be present at the meeting.

Parents are IEP team members. Students are invited to participate during the transition process or as soon as they are able, and their opinions should be sought. Parents and students have important rights in the process, including the right of participation, the right to have experts of their own choosing at the IEP conference, the right to administrative appeal, and even the right to court appeal if they are dissatisfied with the school administration's decision.

Every child with an IEP must be considered for AT devices and services. If the IEP team determines that AT is needed for the child to receive a “free and appropriate public education,” it must be provided by the school district. The school may use non-school funding sources, such as a supplemental grant; however, the school is ultimately responsible for providing the documented AT, including services and aids, whether or not they find additional funding.

In some cases, parents may prefer to purchase an AT device for their child at their own expense, especially if it is required for around-the-clock use, such as a wheelchair or hearing aids. Families may seek AT from Medicare, private insurance companies, vocational agencies, and charitable organizations. If the parent pays for any portion of a device written into the IEP, even if the school pays for most of it, then the device belongs to the student. Even if the parents purchase the device for their child, if the child needs it in order to receive a free and appropriate education, then the school must pay for repairs and maintenance.



504 Plans

Section 504 of the Rehabilitation Act is described on page 12. Just as AT must be specified in an IEP, it must be listed in a student's 504 Plan in order for the school to be responsible for providing it.

Medicaid

Medicaid was established under Title 19 of the Social Security Act and is administered by state agencies. Medicaid is a national program of medical assistance for individuals "whose income and resources are insufficient to meet the costs of necessary medical services." Medicaid will purchase, rent, or lease various types of assistive devices for Medicaid beneficiaries as "durable medical equipment (DME)" if the devices are considered medically necessary. Generally that means the equipment must be:

- prescribed by a physician
- used to restore or approximate normal function of a missing, malfunctioning, or malformed body part
- directly related to a diagnosed medical condition
- expected to provide a therapeutic benefit

Medicaid does have appeals processes, both for ineligibility determinations and for decisions relating to the scope of services. Appeals can take time, but usually must be completed within 30-60 days. The process and timeframe guidelines can be obtained from your state's Medicaid office. To get contact information for your state Medicaid office and other information relevant to the application process in your state, visit the Centers for Medicare and Medicaid Services website at:

www.cms.hhs.gov/states.

Medicare

Many people think of Medicare as a federally funded health insurance program that is only for Americans over 65 years old. However, Medicare also provides insurance to many children and adults with severe disabilities. The program has two parts: Part A- Mandatory Hospital Insurance and Part B- Optional Medical Insurance. It is Part B that may pay for all or a portion of your child's AT devices if they qualify as "durable medical equipment." As with Medicaid, to qualify, an AT device must be considered medically necessary. Your child's doctor must prescribe a specific device and it must be supplied by a Medicare-approved provider.



An excellent, comprehensive reference is *Medicare Funding of Assistive Technology*, a guide written in 2004 by Neighborhood Legal Services, Inc. and the Arizona Center for Disability Law. It can be found online at <http://209.203.251.64/conf2006/medicare%20funding.htm>.

If you are denied funding upon your initial request, realize that denial does not need to be the end point. In fact appealing funding decisions is quite common. Many appeals for funding of assistive technology are successful.



Other AT Funding Sources

In addition to the programs above, there are many local, state, and private sources that fund assistive technology, including:

- **Community Service Organizations**

In many communities, service, religious, or fraternal organizations, such as the Elks and Lions, provide equipment directly to individuals in particular circumstances. Small, case-by-case grants of this sort are hard to categorize, but they tend to hinge on the applicant's ties to the community. They do not necessarily reflect how the organization will distribute funds in the future. When the need is critical or time sensitive, service organizations, which have more flexibility, may offer the best options.

- **Foundation Support**

Many foundations address disability-related needs on an ongoing basis. Foundations, however, are far more likely to give grants or loans to organizations rather than to individuals. When their work does extend to individual recipients, higher education, followed by medical care and disaster relief are usually the priorities. Think of these restrictions as creating opportunities. For example, by working with a consumer organization, donors might create an equipment lending center, from which more than one person can benefit. When "access" to technology, rather than its possession, will meet the need, you may find foundations more likely to provide funding. A number of directories of foundations and corporate donors, such as the *Foundation Directory* by the Foundation Center, can be found in many public libraries.

- **Commercial Loans**

Commercial credit is becoming more widely available for the purchase of AT. Loans may be available through traditional lending institutions, consumer and membership groups, nonprofit organizations, or joint efforts between device vendors and banks.

Fourteen states have received federal funding to establish financial loan programs for individuals with disabilities to purchase assistive technology. The states include Arizona, Arkansas, Florida, Illinois, Kentucky, Louisiana, Maryland, Michigan, Nevada, Oklahoma, Pennsylvania, Utah, Virginia, and Wisconsin. Many other states are independently supporting such programs. (See the Resources section for the location of the Tech Act program in your state.)

- **Private Insurance**

Private insurance comes in many forms and is still largely unregulated when it comes to assistive technology. Although insurance companies do purchase some AT, insurance plans and policies are often silent about exactly what technology is covered. As with Medicare and Medicaid, technology and services must be medically necessary in order to be covered by these plans.

While a typical insurance policy will cover dependent children only through a certain age or until they complete college, many policies have special provisions to cover adult disabled children indefinitely. Check with your employer's benefits department regarding company policy on covering dependents.



Developing a Funding Strategy

Parents will find it useful to begin collecting information on all potential sources as early as possible. The chances of persuading people or organizations to provide funding increase with the parents' ability to meet their criteria, to follow their procedures, and to use their language. Parents should research potential funders thoroughly. Funding sources will have different and sometimes complex selection criteria that should be carefully reviewed.

- ❑ Research technology and funding options on the Internet or at a local information center. Make a list of the opportunities that you want to pursue first, second and third. In many instances, particularly when several components are involved, funding will not come entirely from one source or all at one time. Components may include a computer and peripherals such as printers, an alternative keyboard and software.
- ❑ Make a budget of all your family's expenses. This will help you determine what funds you can put toward the purchase of a device and help you determine if you will seek loans or grants.
- ❑ Gather your family's income documentation, such as a copy of your W2 tax statement. Your income may be an eligibility requirement and being aware of your financial situation will help you make the strongest possible case for funding.
- ❑ Identify people in your life who can help you with the funding process, such as friends, relatives and co-workers. They may have organizational contacts or valuable proposal writing skills. Share with them your goals and keep them up to date on your progress.
- ❑ Keep good records of your funding progress. Use a notebook and folder to keep funding and AT-related information in one place. This will be especially useful if you are working with more than one potential funder or if you need to appeal a case.

Your funding plan should both identify and prioritize potential resources so that you can approach them in the most appropriate order. Establishing an order of approach is important because a number of sources consider themselves "payers of last resort," meaning they won't pay until all other sources have either agreed or refused to fund. It is therefore critical to document the results even when denied funding.

The language you use with different funding sources should reflect the orientation of the source.

- ▶ Medical. In medical settings, stress the therapeutic nature and "medical necessity" of the equipment.
- ▶ Educational. In educational settings, the technology needs to help a child achieve academic and educational goals.
- ▶ Vocational. In vocational settings, the goal and potential for self-sufficiency are crucial elements. Again, it is important to research and understand the language preferred by the potential funder.

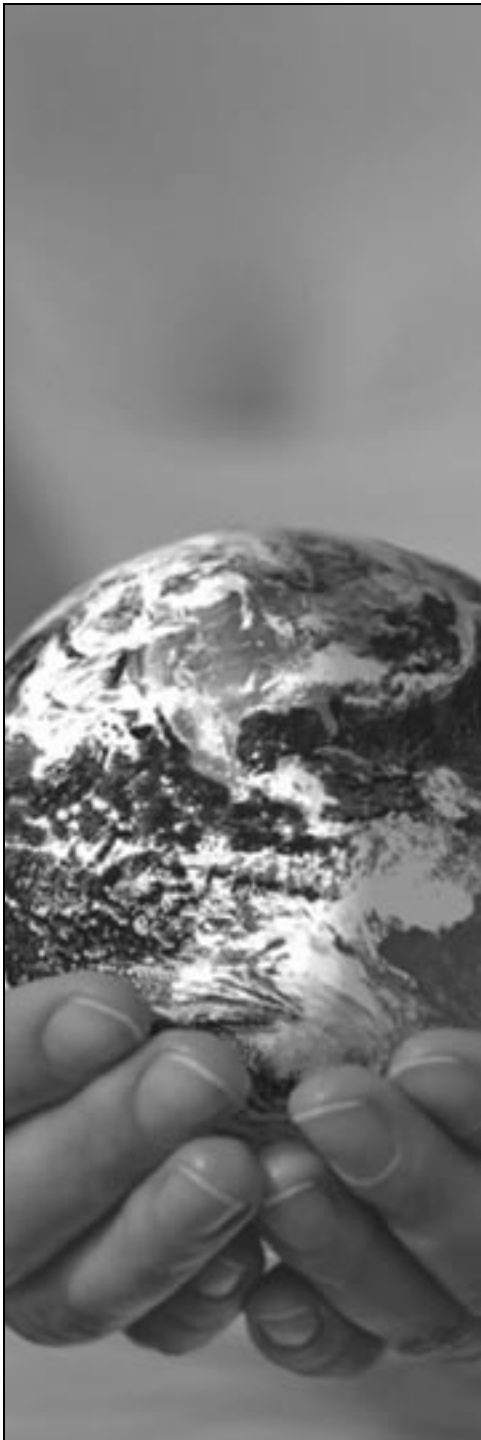
The cost of the AT device is important to many funders, so naturally, opportunities to cut costs should be explored. As parents, you should think of your child's AT needs not in terms of a specific model of a certain device, but in terms of the functional abilities you are trying to make available to your child.



Section 4:

4

Quick Questions & Tips



Quick Questions & Tips

Quick Questions

Where can I learn more about the range of assistive technology devices and services that might help my child?

Ask the professionals who work with your child at school about assistive technology options and resources. Many of the Alliance for Technology Access (ATA) community technology centers offer hands-on learning opportunities through demonstration and equipment loan programs. Contact information for 37 ATA centers is available at <http://ataaccess.org/index.php/reading-room/centers> or from the main office at (707) 778-3011.

In every state there is at least one Parent Training and Information Center (PTI) and/or one Community Parent Resource Center (CPRC) that provide families with a range of disability-related information and support, including AT information. Contact information for the PTI/CPRC network can be found at www.taalliance.org/Centers/index.htm.

The Family Center on Technology and Disability offers a database of articles, guides, websites, videos and other AT materials that is searchable by subject and disability. We also provide a database of AT organizations (including PTIs, CPRCs and ATA centers), many of which provide hands-on and/or web-based information on the range of AT options. Both can be accessed at: www.fctd.info or request a copy of our AT Resources CD-ROM by calling (202) 884-8068 or emailing fctd@aed.org.

Commercial organizations that provide product-specific information include ABLEDATA, AbleNet, and EnableMart. A non-profit site that offers a great deal of product information, searchable by function and product type is assistivetech.net. Contact information for all of these organizations is listed in the Resources section.

Are schools required to provide assistive technology for every child with a disability in a special education program?

The special education program is administered under the Individuals with Disabilities Education Act (IDEA), which requires that school systems provide students with disabilities a "free and appropriate public education (FAPE)." If an AT device or service is determined to be necessary to meet a student's educational goals, and is documented in the student's Individualized Education Program (IEP), the school district is required to provide it for the child at no expense to the parents.

Can parents ask the school for a formal assessment of their child's assistive technology needs for school?

Yes. An evaluation of AT needs may be part of the overall evaluation that a school system conducts to determine a child's eligibility for special education services or it may be part of a subsequent evaluation conducted as part of the IEP process. If an assessment of AT needs has not been included in such evaluations, parents have the right to request a specific AT assessment. The school system may use school personnel to conduct the assessment or it may contract with an independent professional. If parents disagree with the assessment obtained by the district and the district fails to show that the evaluation was appropriate, parents have the right to request another, independently-conducted AT assessment, at school expense. However, if the second assessment agrees with the one provided by the school system, parents may be liable for the cost of the second assessment.



Can my child use assistive technology purchased by the school at home?

On a case-by-case basis, the use of school-purchased AT devices in a child's home or in other non-school settings is permitted if the child's IEP team determines that the child needs access to those devices at home in order to receive a free and appropriate education.

If the school pays for an AT device, to whom does it belong?

If the school pays the entire cost of an AT device, then the school owns the equipment. If a parent pays for any portion of the cost of the equipment, then the family owns the device. Regardless of who owns the equipment, if it is required for the student in order to get a free and appropriate public education and is written into the IEP, the school is responsible for repairing or replacing it if needed.

Can my family get help with funding AT devices and services?

Options for funding assistive technology vary from state to state and family to family. Ask the professionals who work with your child about different funding options that apply to your situation. Common funding sources for families include private insurance, state and federal programs, community organizations and nonprofit agencies. Most funding sources have their own specific requirements. Success in securing funding is frequently dependent on the applicant's ability to address each agency's unique requirements in a funding request. Refer to the Funding section of this guide for information about school, government, and organizational sources of funding.

My child is in a private school. Will s/he have access to assistive technology?

This can be a little complicated as it depends on a number of variables. Children with disabilities who are placed by their parents in private schools are entitled to special education services but at a cost that is limited to a proportionate share of federal IDEA dollars. So if 10% of a district's school children attend private school, then 10% of its special education budget must be spent on those private school students. If the district places a child in a private school, then the district is responsible for 100% of the cost of AT devices and services that have been specified in the child's IEP. However, there are a number of exceptions to this rule, so parents are advised to get advice from a knowledgeable source before assuming that AT will be provided by the public school system.

What can parents do if the school doesn't provide the assistive technology documented in the IEP?

If the school is not providing the AT devices and/or services written in your child's IEP, then you may choose to take further action. When differences arise, try to resolve them informally first. If you can't work out a solution that is satisfactory, you can take more formal steps that may involve mediation, a due process hearing, or filing a formal complaint. A variety of sources of information about mediation and due process are included in this guide.



Quick Tips from Parents Who Have Been There

The Big Picture

- ▶ Make the effort to keep up with new technology developments by attending conferences and workshops, joining an AT listserv, or finding AT resources in your community.
- ▶ Start preparing for your child's future technology needs well in advance. For example, start planning for high school and college while your child is still in grade school.
- ▶ Talk with other children and adults who use assistive technology, not just professionals, to gain a user's perspective.
- ▶ Try out different devices in your child's typical environments, such as school and home, before settling on one device.
- ▶ Participate in a parent advocacy organization or parent support group to learn advocacy skills and to find additional information resources.
- ▶ The Internet is a good tool for learning about assistive technology and locating funding resources. Skillful use of search tools, such as Google and Yahoo, can produce a wealth of information. If you do not have Internet access or feel limited in your use of search tools, try your local library. An increasing number of libraries make Internet use available and resource librarians can offer assistance in targeting your search. Also make use of the Family Center's online databases at www.fctd.info, as all materials have been reviewed by AT professionals and blurbs are provided.
- ▶ Acquiring assistive technology is an ongoing process. Your child's AT needs will change as s/he grows, physically, cognitively, and emotionally.
- ▶ No assistive technology is perfect. Even so, it opens doors to inclusion and independence and is worth the effort.



Communicating Effectively with Your Child's School

- ▶ Keep in touch with your child's teachers through frequent telephone calls, notes, or personal visits. Talk with them about what your child does well and how your child learns best. Ask questions about anything you don't understand.
- ▶ Attend all meetings concerning your child's education. Take notes and be an active, interested parent.
- ▶ Be a good listener. Encourage the staff to keep you informed about your child's progress, relationships with other children, and any problems or concerns they may have. Listen to their professional opinions about your child. Remember that school personnel can also be good advocates for your child!
- ▶ When differences of opinion arise, talk about them. Look for ways to reach a solution, but keep your child's needs uppermost in your mind.

Advocating Effectively for Your Child

- ▶ Know your rights.
- ▶ Make notes on telephone conversations and meetings.
- ▶ Date and save all notes, report cards, IEPs and notices from the school regarding your child's education and progress.
- ▶ Jot down questions you want to ask or information you want to share before you attend meetings.
- ▶ Put all requests in writing and keep copies of all correspondence.
- ▶ Ask your child for information and include the child in meetings whenever possible. Help your child become an effective self-advocate.
- ▶ Meet other parents of children with disabilities – if there isn't an active parent group in your area, organize one.



Section 5:

Glossary of AT Terms and Definitions

It is important for parents to understand the “language” of assistive technology so they can be informed advocates for their child's technology needs. The following glossary of terms can help parents learn about the kinds of assistive technologies that are currently available and how they can be used.

A

Access Utility:

An access utility is a software program that modifies a standard keyboard to simplify operation of the keyboard, replace the mouse, substitute visual cues for sound signals, or add sound cues to keystrokes.

Example: In the case of a young person with a mobility impairment, an access utility is important because it can alter the way keys on the keyboard respond to touch. For example, Jimmy, a young boy with muscular dystrophy, has difficulty pressing the keys quickly; he lingers a bit longer on each key than necessary, or inadvertently presses multiple keys instead of the intended key. Altering the relay time on these keys can enable Jimmy to process information more effectively when using his keyboard.

Many basic modifications can be made through software that already exists on your computer. Altering font size, color contrast, and adding or modifying audio alerts can all be done without purchasing additional software. “Sticky keys” are another very useful modification tool that can be made using pre-existing software. Sticky keys allow the individual to type one key at a time, sequentially, and experience the same results as holding down multiple keys simultaneously. For example, instead of holding down CTRL-ALT-DELETE at the same time, the individual can select each key, one at a time.



Photo courtesy of Freedom Scientific

Additional Resources:

<http://www.ataccess.org/resources/atabook/s02/s02-03b.html>

Accommodation:

In the context of education, an accommodation is a change in the format or presentation of educational materials so that a student with a disability can complete the same assignment as other students. Accommodations can also include changes in setting, timing, scheduling, and/or response mechanisms of tests. Accommodations include: audiotapes of textbooks, tape recorders for capturing classroom lessons, calculators, allowing a student to submit an illustration of key concepts rather than a written report, providing reproduced copies of textbook pages that can be marked up and highlighted, and assignment of a “study buddy” or notetaker. There are dozens of accommodations that can change a student's experience from frustration to success if teachers, aides, and parents are creative. A long list of possible accommodations is provided by The Families and Advocates Partnership for Education (FAPE) and can be viewed on their website at <http://www.fape.org/>.

Activities of Daily Living:

Activities of Daily Living (ADL): Frequently used in national surveys as a way to measure self-care abilities in daily life, ADLs include basic tasks such as eating, bathing, dressing, toileting, getting in and out of a chair or bed, and getting around while at home. National surveys also measure another level of self-care functioning, Instrumental Activities of Daily Living (IADLs), which include activities such as doing everyday household chores, preparing meals, conducting necessary business, using the telephone, shopping, and getting around outside the home. □

Adaptive Technologies:

Adaptive technologies are a type of assistive technology that include customized systems that help individual students move, communicate, and control their environments. Adaptive technologies are designed specifically for persons with disabilities; these devices would seldom be used by non-disabled persons. Examples include augmentative communication devices, powered wheelchairs and environmental control systems. These assistive technologies are not used exclusively for education purposes, and can be used in all of the child's environments.

Aids for Daily Living:

Another category of assistive technology, these self-help aids help people with disabilities eat, bath, cook and dress.

Example: A wide range of devices fall under the phrase Aids for Daily Living (ADLs). A "low tech" example would be a finger nail brush with two suction cups attached to the bottom that could stick onto a flat surface in the bathroom. Such an ADL would allow a child with limited mobility to clean her nails without having to grip the brush. There are also "higher tech" ADLs. For more information on these devices, see Environmental Control Units (ECUs).



Photo Courtesy Alitons



Photo Courtesy Grip Advantage

Alternative Access/Input Device:

An alternative access/input device allows individuals to control their computers using tools other than a standard keyboard or pointing device. Examples include alternative keyboards, electronic pointing devices, sip-and-puff systems, wands and sticks, joysticks, and trackballs.



Photo Courtesy Don Johnston

Example: A "modified mouse" such as a joystick or trackball can make a world of difference to a child with limited mobility. While using an ordinary mouse would be difficult for someone with limited refined motor skills, the design of a joystick would allow him to have more complete control of his Web surfing experience.

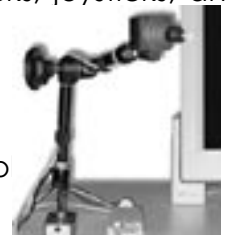


Photo Courtesy of Aroga

Alternative Keyboard:

Alternative keyboards may be different from standard keyboards in size, shape, layout, or function. They offer individuals with special needs greater efficiency, control, and comfort.



Example: Alejandro is a child with cognitive disabilities. The traditional QWERTY keyboard is confusing, so his mom replaces it with a keyboard that lists letters A-Z in big, bold letters and doesn't contain a lot of "extra" keys. This makes focusing on spelling and typing words a lot easier for him.

Photo Courtesy of Big Keys

Ambulation Aids:

Devices that help people walk upright, including canes, crutches, and walkers.

Americans with Disabilities Act:

The American with Disabilities Act of 1990 (PL101-336) prohibits employers from discriminating against people with disabilities and makes such discrimination a civil rights violation. Providers of public services, schools, public buildings and public transportation services also must provide accessibility to people with disabilities.

Architectural Adaptations

Architectural adaptations are structural fabrications or remodeling in the home, work site, or other area. Examples that remove or reduce physical barriers for an individual with a disability include ramps, lifts, lighting, altering counter top heights and widening door frames.

Articulated Forearm Support:

An articulated forearm support follows the user's movements and drastically reduces the muscle work involved in sustained keying or mouse use.

Assistive Technology Device:

An assistive technology (AT) device includes any item, piece of equipment, or product system that is used to increase, maintain, or improve the functioning of individuals with disabilities. It may be purchased commercially off the shelf, modified, or customized. The term does not include a medical device that is surgically implanted, or the replacement of such a device.



Example: Almost every example in this glossary is an example of an AT device. From low tech, such as a pen or pencil grip; to high tech, such as a computer that responds to touch and allows a child to communicate more effectively, the tools fall within the category of AT devices.

Photo Courtesy of IntelliTools

Assistive Technology Service:

An assistive technology service is one that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device. Examples include evaluating, selecting, buying, designing, fitting, customizing, maintaining, repairing, replacing, coordinating, and training of students, teachers and family members.

Augmentative Communication System:

An augmentative communication system is any system that increases or improves communication of individuals with receptive or expressive communication impairments. The system can include speech, gestures, sign language, symbols, synthesized speech, dedicated communication devices, microcomputers, and other communication systems.

Photo Courtesy of Mayer-Johnson

Auxiliary Aids and Services

Under the Americans With Disabilities Act (see definition above), professionals and organizations must communicate as effectively with people with disabilities as they do with others. Auxiliary aids and services assist in this effort. Auxiliary aids may include taped texts, interpreters or other effective methods of making materials usually delivered orally available to students with hearing impairments; readers in libraries for students with visual impairments; classroom equipment adapted for use by students with manual impairments; and other similar services and actions.

B**Battery Interrupter:**

A battery interrupter allows the user to modify battery-operated devices for switch input. Simply place the battery interrupter between the battery and its connection point in the battery compartment. Make a notch in the compartment lid allowing the cord to pass through when it is closed and then secure the lid. Place the battery-operated device in its ON position. Plug your switch into the input jack of the battery interrupter and you're set.

Braille:

A raised dot printed language that is used by persons with visual impairments. Each raised dot configuration represents a letter or word combination.

Braille Display:

A Braille display is a tactile device consisting of a row of special 'soft' cells. A soft cell has 6 or 8 pins made of metal or nylon; the pins are controlled electronically to move up and down to display characters as they appear on the display of the source system - usually a computer or Braille note taker...They can also be used for advanced math work and for computer coding. A number of cells are placed next to each other to form a soft or refreshable Braille line. As the little pins of each cell pop up and down, they form a line of Braille text that can be read by touch.



Braille Embossers and Translators:

A Braille embosser transfers computer-generated text into embossed Braille output. Translation programs convert text, scanned in or generated via standard word processing programs, into Braille that can be printed on the embosser.



C

Captioning:

A text transcript of the audio portion of multimedia products, such as video and television, that is synchronized to the visual events taking place on screen.

Example: For a child with a severe hearing impairment, captioning of television, video, and multimedia makes an enormous difference. When captioned, a CD-Rom that uses audio narration to tell a story, will allow a child to enjoy and understand the material the same way a child without a hearing impairment would.

D

Digitized Speech:

Digitized Speech is speech that has been digitally recorded for later play-back. As it is a recording, the quality is good and easy to understand. Digitized speech may be used in CD-Roms for talking stories, in encyclopedias, and in software packages where teachers and students are able to record sounds, words and sentences themselves. Digitized Speech has a finite, predetermined vocabulary and so does not offer full access to mainstream software.

Due Process Hearing

You may request a due process hearing at any time if you are unable to resolve your differences with the school. A due process hearing is more formal than mediation, and the parties generally are represented by attorneys. An impartial hearing officer hears both sides of the dispute and issues a written decision within 45 calendar days of the hearing request. If either the parents or the school disagrees with the decision of the hearing officer, the decision may be appealed through the court system.

E

Electronic Pointing Devices:

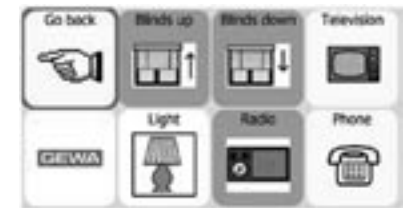
Electronic pointing devices allow the user to control the cursor on the screen using ultrasound, an infrared beam, eye movements, nerve signals, or brain waves. When used with an on-screen keyboard, electronic pointing devices also allow the user to enter text and data.



Example: Electronic pointing devices might look a bit like something from the space age, but the technology is life changing for people with little or no mobility. Take the case of Vanya, a teenager with a traumatic brain injury. Vanya's ocular movement was tracked and registered. She is now able to use a device that lets her interact with her computer, and thereby control her environment, solely with eye movement.

Environmental Control Unit (ECU):

Environmental control units (ECUs) are systems that enable individuals to control various electronic devices in their environment through a variety of alternative access methods, such as switch or voice access. ECUs can control lights, televisions, telephones, music players, door openers, security systems, and kitchen appliances. These systems can also be referred to as Electronic Aids to Daily Living (EADL).



Eye Gaze Board:

An Eye Gaze Board is a clear Plexiglas board that is used as a simple communication device. Pictures are mounted at strategic areas on the board and the user is asked to look at the picture they want to choose.



F

FAPE

This abbreviation stands for "free and appropriate education". It is the term used in the IDEA law, which states that school systems must provide children with disabilities with special education services and accommodations (including AT) at no cost to the parents. The law does not say what is considered an "appropriate" education, but other references within the law imply that children should be taught in the most typical classroom setting possible.

I

Individuals with Disabilities Education Act (Amendments of 1997):

The Individuals with Disabilities Education Act (IDEA) was initially passed in 1975 as P.L. 94-142. That Law, known as the Education for All Handicapped children Act, or the EHA, guaranteed that eligible children and youth with disabilities would have a free and appropriate public education (FAPE) available to them, designed to meet their unique educational needs. P.L. 94-142 has been amended many times since passing in 1975, most recently in 2004.

For more information about IDEA, you can visit the following website:

<http://www.ed.gov/offices/OSERS/Policy/IDEA/index.html>

Individualized Education Program (IEP):

Each public school child who receives special education and related services must have an Individualized Education Program (IEP). Each IEP must be designed for one student and must be a truly individualized document. The IEP includes such information as present levels of functioning, future goals, and services to be provided. The IEP creates an opportunity for teachers, parents, school administrators, related services personnel, and students (when appropriate) to work together to improve educational results for children with disabilities.

Additional Resources: <http://www.katsnet.org/docs/ATandIEP2013.pdf>

Information Technology:

Information technology includes any product used to acquire, store, manipulate, or transmit information, such as computers, multimedia, telecommunications, copy machines, and the Internet.

Infrared Sender/Receiver:

An Infrared Sender/Receiver is a device commonly found in an environmental control unit (ECU). An infrared signal is sent to the control unit, which in turn sends an infrared signal to the appliance. These are usually small and portable and vary in size and shape. They can be used in different areas of the same room, but the remote must be aimed directly at the control box, with nothing in its path, for the signal to be received.

J

Joysticks:

A joystick may be used as an alternate input device. Joysticks that can be plugged into the computer's mouse port can control the cursor on the screen. Other joysticks plug into game ports and depend on software that is designed to accept joystick control.

See also: Alternative Access/Input Device



Photo Courtesy of Aroga

K

Keyboard Additions:

A variety of accessories have been designed to make keyboards more accessible. Keyguards are hard plastic covers with holes for each key. Someone with an unsteady finger or using a pointing device can avoid striking unwanted keys by using a keyguard. Moisture guards are thin sheets of plastic that protect keyboards from spills and saliva. Alternative labels add visual clarity or tactile information to the keys.

Example: When John, a young man with muscular dystrophy, doesn't use the keyguard, he often clicks letters that he doesn't want. The clearly defined spaces between keys, provided by the keyguards, helps him select the keys he wants.



Photo Courtesy of IntelliTools

Keyboard Emulator:

A keyboard emulator is a device that is connected to or resides in a computer and imitates the computer's keyboard in function and performance.

L

LRE

The abbreviation LRE stands for "least restrictive environment." This means that to the maximum extent appropriate, children with disabilities are educated with children who are not disabled. Removal from the regular educational environment occurs only when a student cannot be successfully educated in that setting even with supplementary aids and services.

M

Mediation

In the context of AT, mediation is a process to resolve disagreements between parents and school personnel. It is provided at no cost to you or the school district. Both parties must agree to mediation. A neutral trained mediator will facilitate the meeting to help both parties resolve their disagreements. Mediation is more structured than conciliation but less formal than a due process hearing.

Mobility and Transportation Aids

Mobility and transportation aids include products that help mobility-impaired persons move within their environment, and give them independence in personal transportation. These products include standing or walking aids, transfer aids, stair lifts, walkers, scooters, wheelchairs and three-wheeled chairs, adapted bikes and tricycles, car seats or beds, stretchers, patient chairs, ramps, recliners, strollers, travel chairs, wheelchair trays, driving controls, seat belts, vehicle conversions, patient and wheelchair lifts, wheelchair loaders/carriers and wheelchair restraint systems.

Onscreen Keyboard:

On-screen keyboards are software images of a standard or modified keyboard placed on the computer screen by software. The keys are selected by a mouse, touch screen, trackball, joystick, switch, or electronic pointing device.

Example: Brad, a young boy with limited mobility and severe verbal impairments, uses onscreen keyboards to communicate with those around him. Through these keyboards (both pre-formatted keyboards and those designed by his parents to meet his specific needs) and selecting options on the screen, he is able to relay concepts, needs and thoughts more easily.



Courtesy of Zygo, USA

Optical Character Recognition and Scanners:

Optical character recognition (OCR) software works with a scanner to convert images from a printed page into a standard computer file. With OCR software, the resulting computer file can be edited. Pictures and photographs do not require OCR software to be manipulated.

Example: Pierre is a high school student who was diagnosed with Stargardt disease (inherited juvenile macular degeneration) at age 10. He has been legally blind since age 12. Much of his schoolwork is available electronically, and he uses his screen reader to scan the text. Often, however, documents are only available in hard copy. These documents are scanned into his computer using a basic scanner with OCR software. The “graphic” image from the printed page then becomes electronic text.

P

Pointing and Typing Aids:

A pointing or typing aid is typically a wand or stick used to strike keys on the keyboard. They are most commonly worn on the head, held in the mouth, strapped to the chin, or held in the hand.

Example: For Kwame, a young man with severe spinal cord injury and no mobility from his head down, pointing and typing aids allow him to interface with his computer. His aid, a small patch worn on his forehead, allow him to navigate around his computer. When he moves his head, this device substitutes as a mouse and allows him to perform standard activities, such as playing games or taking tests, and even more advanced activities like drawing.



Photo courtesy of Madentec

Additional Resources:

Alliance for Technology Access at <http://www.ataccess.org/resources/atabook/s02/s02-03i.html>

Prosthetic and Orthotics:

Prosthetic and orthotics include replacement, substitution or augmentation of missing or malfunctioning body parts with artificial limbs or other orthotic aids. This includes splints, braces, foot orthosis, helmets, restraints, and supports.

S

Screen Enlargement Programs:

Screen enlargement programs magnify a section of the screen, increasing the visibility for users with limited vision. Most screen enlargement programs have variable magnification levels and some offer text-to-speech options.

Screen Reader:

A screen reader is a software program that uses synthesized speech to “speak” graphics and text out loud. This type of program is used by people with limited vision or blindness.

Example: Teri has been blind from birth. A screen reader allows her to access visual information on a computer screen. A piece of software installed in her computer goes “behind the scenes” and reads the text that exists behind the graphic Web pages that sighted people read.

Seating and Positioning Aids:

Seating and positioning aids offer modifications to wheelchairs or other seating systems. They provide greater body stability, upright posture or reduction of pressure on the skin surface. Equipment includes wheelchair cushions, trunk/head supports, modular seating, and seating lifts.

Switches and Switch Software:

Switches offer an alternative method to provide input into a computer when it is not possible to use a more direct access method, such as a standard keyboard or mouse. Switches come in various sizes, shapes, colors, methods of activation, and placement options. An interface device and software program are usually required to connect the switch to the computer and interpret the operation of the switch.

Photo Courtesy of Aroga



Some software programs have been developed specifically for use with a switch and can employ on-screen scanning. With on-screen scanning, the computer highlights the options available to the user depending upon what action he or she wants the computer to take. The highlights are done either by sound, visual cue or both. When a visual or auditory prompt indicates a specific keyboard or mouse function, the user activates the switch and the desired function occurs.

Other programs have built-in options to allow switch use. Many standard software programs can be accessed through a switch with the use of additional software and devices.

T

Talking Word Processors:

Talking word processors (TWP) are writing software programs that provide audio feedback as the student writes. As each letter is typed and each word is written, the TWP will “speak” it back to the user. Many of these inexpensive writing programs also incorporate powerful tools for reading. Students with learning disabilities often find that having written material read aloud helps them to better edit, comprehend and organize their projects. Once a file (i.e. story from a book, assignment, article or typed information) is imported into a talking word processor, the text can be read aloud to the student. These TWP programs offer other adjustments as well, such as enlarging the size of the text, and changing the color of the foreground, background, and highlighting box, to assist students in following along as the text is read.

Touch Screens:

A touch screen is a device placed on or built into the computer monitor that allows direct activation of the computer, or selection of a program, through a touch on the screen.



*Photo Courtesy of
Mayer-Johnson, LLC*

TTD or TTY :



A telecommunication device for the deaf TTY/TDD is a device with a keyboard that sends and receives typed messages over a telephone line.

Photo Courtesy of Galludet University

U

Universal Design:

Universal design is the design of products and environments so they are usable by a wide range of people. Examples of universally designed environments include buildings with ramps, curb cuts, and automatic doors.

Universal Design for Learning:

Universal Design for Learning (UDL) is the design of instructional materials and activities that make learning goals achievable by individuals with wide differences in their abilities to see, hear, speak, move, read, write, understand English, attend, organize, engage, and remember. Universal Design for Learning is achievable via flexible curricular materials and activities that provide alternatives for students with differing abilities. These alternatives are built into the instructional design and operating systems of educational materials; they are not added on after-the-fact.

V

Voice Recognition:

Different types of voice recognition systems (also called speech recognition) are available. Voice recognition allows the user to speak to the computer, instead of using a keyboard or mouse, to input data or control computer functions. Voice recognition systems can be used to create text documents such as letters or email, to browse the Internet, and to navigate among applications and menus.

W

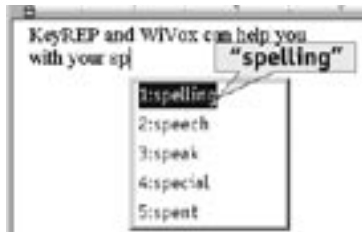
Web Accessibility

Universal accessibility to the Web means that all people, regardless of their physical or developmental abilities or impairments, have access to Web-based information and services. Making Web pages accessible is accomplished by designing them to allow the effective use of adaptive technologies to access their content.

See also, Screen Reader

Word Prediction Programs:

Word prediction programs allow the user to select a desired word from an on-screen list located in the prediction window. The computer-generated list predicts words from the first or second letter(s) typed by the user. The word may then be selected from the list and inserted into the text by typing a number, clicking the mouse, or scanning with a switch.



Example: Word prediction programs speed up the time it takes Johanna, a young woman with quadriplegia, to communicate her needs to her personal assistant (PA). Instead of typing out full words, a drop down list of common words, beginning with the initial letters entered, appears allowing the entire word to be simply “clicked” instead of typed out in full. Word prediction programs also help Chad, a sixth grader with learning disabilities, when he is writing papers for school. Often he can only recall parts of a word or can spell a word phonetically, but cannot correctly spell the word. Word prediction programs allow Chad to type in a few letters, or type in a word’s phonetic spelling, and then present him with correctly spelled alternatives.

X

X-10 Unit:

X-10 is a communications “language” that allows compatible products to talk to each other using the existing electrical wiring in the home. Most X-10 compatible products are very affordable and the fact that they talk over existing wires in your home means that no costly rewiring is necessary. Installation is simple, a transmitter plugs (or wires) in at one location in the home and sends its control signal (on, off, dim, bright) to a receiver which plugs (or wires) into another location in the home.



Section 6:

Additional AT Information Resources

How to Learn More

The world of assistive technology is constantly changing. New tools are invented and old tools are upgraded. It can be difficult to stay current with the latest in AT and determine which tools are best for your child. There are many ways to keep up with developments in technology and learn more about the law, writing an IEP, using AT devices at school, or finding funding. The majority of the information providers listed below are accessible via the Internet. If you do not have Internet access at home, it is likely that your public library and your child's school library can provide access to these websites. We have also provided mailing addresses and telephone numbers where possible. Remember – the goal of everyone working in this field is to help you and your family.

National Sources of Assistive Technology Information

Family Center on Technology and Disability

The Family Center (FCTD) provides a range of AT resources to organizations that work with families of children with disabilities. Funded by the U.S. Department of Education, all of the Center's resources are free and may be accessed directly by families via its website. Resources include two searchable databases: (1) AT-related articles, guides, information sheets, websites, and training materials and (2) information about organizations from which families may receive information and services. The FCTD hosts month-long online discussions led by national experts on topics such as AT funding, inclusion, assessment and evaluation, and other relevant topics. The Center produces a monthly newsletter featuring interviews with AT experts and annual CD-ROMs containing all of the AT content on its website. The Family Center offers a Summer Institute on Assistive Technology, which may be taken for Continuing Education Credit.

Family Center on Technology & Disability
1825 Connecticut Avenue, N.W.
Washington, D.C. 20009
Website: www.fctd.info
Email: fctd@aed.org
Voice: 202-884-8068
Fax: 202-884-8441

Alliance for Technology Access Resource Centers

The Alliance for Technology Access (ATA) is a national network of resource centers that focus on technology for people with disabilities. The services provided by the centers vary from state to state, but many offer assistive technology assessment, consultation, training, demonstration, lending programs, referrals, and general information. For a list of resource centers in your state, contact ATA headquarters and ask them to refer you to centers in your area or refer to the ATA website below for a list of national centers.

Alliance for Technology Access - National Office
1304 Southpoint Blvd., Suite 240
Petaluma, CA 94954
Website: www.ataaccess.org
Email: ATAinfo@ATAccess.org

Voice: 707-778-3011
Fax: 707-765-2080
TTY: 707-778-3015

State Technology Act Projects

State Technology Act projects are funded by the federal Assistive Technology Act of 2004. The services of these projects vary from state to state, but many offer state-specific information and referral, training, resources, and information on legislation and funding for assistive technology.

For a complete list of "Tech Act" projects in each state, you can visit the Association of Assistive Technology Act Programs (ATAP) at http://www.ataporg.org/states_listing.html.

In addition, NICHCY compiles disability-related resources in each state, and creates State Resource Sheets. The sheets help you locate organizations and agencies within your state that address disability-related issues. You can contact them by phone at 800-695-0285 V/TTY or online at: <http://nichcy.org/state-organization-search-by-state>.

Parent Training and Information Centers

Each state is home to at least one Parent Training and Information Center (PTI). Parent Centers serve families of children and young adults from birth to age 22 with all disabilities: physical, cognitive, emotional, and learning. They help families obtain appropriate education and services for their children with disabilities; work to improve education results for all children; train and inform parents and professionals on a variety of topics; resolve problems between families and schools or other agencies; and connect children with disabilities to community resources that address their needs. To find a Parent Center in your state or region, contact:

Technical Assistance Alliance for Parent Centers - National Office
8161 Normandale Blvd.
Bloomington, MN 55437
Website: www.taalliance.org
Email: alliance@taalliance.org
Voice: 952-838-9000 or 1-888-248-0822
TTY: 952-838-0190

U.S. Department of Education

The Department of Education's Office of Special Education and Rehabilitative Services (OSERS) is comprised of the Office of the Assistant Secretary (OAS) and three program components: the Office of Special Education Programs (OSEP), the National Institute on Disability and Rehabilitation Research (NIDRR), and the Rehabilitation Services Administration (RSA). OSER's reports and resources, including toll-free telephone numbers, can be accessed at: www.ed.gov/about/offices/list/osers/osep/index.html.

The Office of Special Education Programs (OSEP) has its own website at: www.ed.gov/about/offices/list/osers/osep/index.html. Families can learn more about the new IDEA legislation and link to many of the resources discussed in this guide via OSEP's website.

Additional Websites with Assistive Technology Information

The websites listed below offer information about AT products. Some offer basic AT training material as well.

ABLEDATA

The ABLEDATA website contains a searchable database of information on more than 30,000 assistive technology products. The database contains detailed descriptions of each product, including price and vendor contact information. The database also contains information on non-commercial prototypes, customized and one-of-a-kind products, and do-it-yourself designs.

ABLEDATA
8630 Fenton Street, Suite 930
Silver Spring, MD 20910
Website: <http://www.abledata.com>
Voice: 800-227-0216

Assistivetech.net

The Assistivetech.net website offers a wide variety of assistive technology and disability-related information, including a searchable AT database that is designed to help you target solutions, determine costs, and link to vendors that sell products. Target audiences include people with disabilities, family members, service providers, educators, and employers.

Georgia Tech Center for Assistive Technology and Environmental Access
490 Tenth Street, NW
Atlanta, GA 30332-0156
Website: www.assistivetech.net
Email: info@assistivetech.net
Voice/TTY: 800-726-9119 or 404-894-1414
Fax: 404-894-9320

AT Online Training Project

Developed by the University of Buffalo's Center for Technology, this website provides AT-related information under the following headings: Assistive Technology Basics; Tutorials; Assistive Technology Decision Making; and Resources. The site is easily navigable and features large print. Website content is aimed at parents, caregivers and teachers who are beginning their introduction to technology use by children with special needs.

Assistive Technology Training Online Project
University at Buffalo -
Center for Assistive Technology
515 Kimball Tower
Buffalo, NY 14214
Website: <http://www.atto.buffalo.edu>

Email: atto-webmaster@buffalo.edu
Voice: 716-829-3141
Fax: 716-829-3217

Infinitec

The Infinitec website is a joint effort of the United Cerebral Palsy Association (UCP) of Chicago and UCP Associates in Washington, D.C. The AT-related information on the site is useful not only to those with Cerebral Palsy, but to a wide range of families and practitioners. The site is organized in four sections: independent living, learning, playing, and working.

UCP Chicago - Infinitec
160 N.Wacker Drive
Chicago, Illinois 60606
Website: <http://www.infinitec.org>
Voice: 312-368-0380

While the sites above contain a wide range of disability-related information, you may want to research your child's specific disability(ies) in greater depth. Using Internet "search engines" can be useful for such research. Using a search engine is easy. Simply type one of the following addresses in the "address" line near the top of your Internet screen and click enter.

www.google.com

www.yahoo.com

www.dogpile.com

When the search engine site appears on your screen, type key words that best describe the topic you are interested in. If you are unsure about the spelling of a particular disability or AT term, the following website includes extensive glossaries of disability-specific terms: <http://www.fapeonline.org/terms.htm>

The National Institutes of Health website - <http://health.nih.gov> - includes an A-Z listing of health topics, including many disability terms. The NIH site provides a great deal of information about each disability as well.

Assistive Technology Publications

Computer and Web Resources for People with Disabilities, 4th Edition

With a foreword written by Stephen Hawking, this updated version of ATA's popular resource offers reader-friendly information on a wide range of computer hardware and software issues. It provides worksheets and checklists to help families and others construct an assistive technology plan. It also offers a "technology toolbox" designed to help match functional abilities and appropriate technologies. The book is available in paperback for \$24.95 and spiral-bound for \$31.95. Ordering information is found on ATA's website, identified below.

Alliance for Technology Access
1304 Southpoint Blvd., Suite 240

Petaluma, CA 94954
Website: <http://www.ataccess.org>
Voice: 707-778-3011
TTY: 707-778-3015
Fax: 707-765-2080

Family Guide to Assistive Technology

Parents, Let's Unite for Kids (PLUK) is a Montana-based organization formed by parents of children with disabilities and chronic illnesses. Although this resource dates to 1997, much of its information remains useful. It can be read online at www.pluk.org/AT1.html.

Journal of Special Education Technology

Published by the Council for Exceptional Children, JSET is a professional journal that presents up-to-date information about issues, research, policy, and practice related to the use of technology in the field of special education. The online version is available free of charge and is easy to navigate. The print version is available for \$40 per year.

The Council for Exceptional Children
1110 North Glebe Road, Suite 300
Arlington, VA, 22201-5704
Website: <http://www.cec.sped.org/>
Voice: 703-620-3663 or 1-888-CEC-SPED
TTY: 703-264-9446
Fax: 703-264-9494

Computer Monitor Newsletter

A publication of the PACER Center, this free quarterly newsletter is available in print or online. The newsletter features articles on assistive technology products, strategies for implementation of assistive technology, AT training opportunities, and success stories about individual AT users. Target audiences are parents, educators, and people with disabilities.

PACER Simon Technology Center
8161 Normandale Blvd Minneapolis, MN 55437
Website: <http://www.pacer.org/stc/>
Voice: 952-838-9000

AT Journal

This free monthly e-newsletter is published by the AT Network and California Assistive Technology Systems. The journal features articles on new developments in technology, success stories, legislative updates, and more. You can access the journal via the website or you can register to receive it via email.

Website: <http://atnetworkblog.blogspot.com/>

Voice: 800-390-2699
TDD: 800-900-0706

Exceptional Parent Magazine

This monthly print and online magazine features articles and resources on assistive technology from a parent perspective. The online version is free but requires that users complete a registration form. The print version is available for \$35 annually.

P.O. Box 2079
Marion OH, 43306
800-372-7368
www.exceptionalparent.com

AT Information on Video, CD, and DVD



I Can Soar: How technology helps students take off

National Center for Technology Innovation, 2003

Available as a free Web download or on captioned CD-ROM, "I Can Soar" is a 26-minute, documentary-style video with supporting materials that describes how four students with disabilities use assistive technology (AT). The video shows assistive tools being effectively integrated into the students' lives at home, at school, and in the community. Family members, teachers, therapists, administrators, and others describe methods for choosing AT solutions, putting them into use, and ensuring they work for each student.

To access online: <http://www.usu.edu/mprrc/icansoar/icansoar1.cfm>

To order the CD-ROM, contact:

Council for Exceptional Children
1110 North Glebe Road, Suite 300
Arlington, VA 22201

Voice: 703-620-3660 or 888-232-7733 / TTY: 866-915-5000 (toll-free) Fax: 703-264-9494

E-mail: services@cec.sped.org

Freedom Machines

Freedom Machines, a public television program and national outreach campaign, looks at society's beliefs about disability through the lens of assistive technology. Viewers meet a cross-section of America's population—a few of the 54 million Americans with disabilities—whose lives are being transformed with the help of new technologies.

To order a copy of the program and to learn about the national outreach campaign, go to <http://www.freedommachines.com>.

Conferences on Assistive Technology Products and Services

For those interested, there are a number of national conferences that focus specifically on assistive technology. The largest are:

Assistive Technology Industry Association

526 Davis Street, Suite 217

Evanston IL 60201

Website: www.ATIA.org

Voice: 847-869-2842

Closing the Gap

P.O. Box 68

Henderson MN 56044

Website: www.closingthegap.com

Voice: 612-248-3294

Fax: 612-248-3810

Technology and Persons with Disabilities Annual Conference

California State University, Northridge (CSUN)

Center on Disabilities

18111 Nordoff Street

Northridge CA 91330-8340

Website: www.csun.edu/cod

Email: ltm@csun.edu

Voice/TTY: 818-885-2578

Fax: 818-677-4929

There are, in addition, many online discussions and forums that can provide access to national experts and others in the field, from the comfort of your home computer. The Family Center on Technology and Disability offers six month-long discussions per year, featuring experts on a range of AT subjects. Funded by the U.S. Department of Education's Office of Special Education Projects, they are free of charge to the public. To view archived discussions and participate in a current or upcoming discussion, visit <http://www.fctd.info>.

We hope this guide has been helpful to you.

It can be read online, with active links to the resources, at www.fctd.info

Additional print copies are available for \$10

To order one or more print copies, you can call, e-mail, or order online:

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