

## **IX. ASSISTIVE TECHNOLOGY**

The explosion of new technology in recent years has literally revolutionized life for persons with disabilities. Ranging from the simplest of “low tech” devices which respond to functional challenges, to the most sophisticated “high tech” solutions, technology is making it possible for people to transcend their disabilities and live independently, work competitively, and get much more enjoyment out of life.

### **ACCESS THROUGH ELECTRONICS**

For individuals with visual impairments, the lack of access to the universe of information only available in print or other visual media has for centuries posed an enormous barrier both to independent living and to employment. Now, thanks to the emergence of the electronic age, access to printed information is greatly enhanced for blind and visually impaired persons.

- **Computers** have neutralized some of the most disabling aspects of visual impairment by creating immediate access to the printed word. They have also opened up a vast new body of information by making the Internet available.

- **Software** enlarges the print and images on computer monitors, so that low vision individuals can read their screens.
- **Speech Synthesizers** produce speech output for totally blind persons.
- **Translation Programs** produce Braille printouts of any material contained in a computer file.
- **Reading Machines** which are comprised of Optical Character Recognition (OCR) devices in tandem with conversion software, “read” printed books and other materials by scanning the print and producing the output in enlarged print, speech, or Braille.

Access to the printed word is therefore now immediate, compared to those not so long ago days when it took weeks or months to have materials translated into Braille or read onto tape.

## **THE CLOSED CIRCUIT TELEVISION**

One of the most useful devices for persons with low vision is the Closed Circuit Television (CCTV). This machine will magnify print from any source (e.g. books, papers, letters, etc.) onto a TV screen. The user can adjust the size of the letters, ranging from just a little larger than normal to large enough to fill the screen with

only one letter. The CCTVs are available from a number of sources. See the “Directory of Vendors of Assistive Technology” listed in the “Directory of Resources” section of this *Handbook*.

## **FINDING OUT WHAT IS AVAILABLE**

There are a staggering number and variety of electronic devices, which have been designed for blind and visually impaired persons. It can be difficult and confusing for individuals to select the right device for their own specific needs. A good way to look at all the options and experience hands-on demonstrations is to attend one of the conferences where there is a large exhibit area with a broad representation of exhibitors. Such conferences are held by the California Council of the Blind (CCB), the National Federation of the Blind (NFB) of California and the Center on Disabilities at the California State University at Northridge (CSUN). The CCB and the NFB of California hold two conferences per year, one in northern and one in southern California. The CSUN holds its annual conference in Los Angeles in March. The contact information for these organizations is listed below.

### **California Council of the Blind (CCB)**

1510 J Street, Suite 125

Sacramento, CA 95814

(916) 441-2100

(800) 221-6359 (Toll-Free in CA)

(916) 441-2188 (Fax)

Website: [www.ccbnet.org/](http://www.ccbnet.org/)

E-mail: [ccotb@ccbnet.org](mailto:ccotb@ccbnet.org)

**National Federation of the Blind (NFB) of California**

39481 Gallaudet Drive Apt. 127

Fremont, CA 94538

(510) 248-0100

(877) 558-6524 (Toll-Free)

Website: [www.nfbcal.org](http://www.nfbcal.org)

**Center on Disabilities**

**California State University, Northridge**

18111 Nordhoff Street, Bayramian Hall, Room 110

Northridge, CA 91330

(818) 677-2578

(818) 677-4929 (Fax)

Website: [www.csun.edu/cod](http://www.csun.edu/cod)

E-mail:

[www.csun.edu/cod/about/contactus.php#message](http://www.csun.edu/cod/about/contactus.php#message)

Most vendors of technology have statewide representation by marketing specialists. These representatives will come to your home and show you their equipment. This is a good way to learn what is available and what might be helpful to you. A list of these vendors is included in the “Directory of Vendors of Assistive Technology” listed in the “Directory of Resources” section of this ***Handbook***.

## LOW TECH WORKS TOO

Although most people think in terms of computers when thinking of technology, assistive technology devices and services for persons with disabilities include an unlimited range of appliances and activities. Assistive Technology includes any tool, device, or apparatus which enables a person with a disability to perform a function he or she cannot perform without it. Just about anything, no matter how simple can be considered *Assistive Technology*.

For visually impaired persons, there are hundreds of gadgets to help function independently around the house. They include Large Print clocks and timers, talking scales, Large Print and talking thermometers, measuring cups, spoons, and tape measures with enlarged print and raised lines, needle threaders, sock sorters, knives with cutting guides, sensors that beep when liquid being poured reaches the top of the glass. There are beepers that sound off to help you find your keys, glasses or purse, and that is only the beginning.

Many people develop their own technology, such as the woman with the use of only one hand who discovered that if she put a nail in her cutting board, she could hold an onion or tomato in place while slicing it one-handed. Most visually impaired persons develop countless systems and devices for themselves to help with day-to-day activities.

## MOBILITY AIDS

Technology is also developed to enhance mobility. For example, there are glasses that provide auditory information about the environment, hand held scanners that detect the location and intensity of light and Talking Signs™ which indicate the location of features such as public telephones and bus stops.

A good way to find out about the assistive technology that may be helpful to you is to browse through catalogs. There are several vendors that offer a general inventory of household aids, tools, magnification equipment, tape recorders, recreational materials, etc. A list of these vendors is included in the “Directory of Vendors of Catalogs of Merchandise” listed in the “Directory of Resources” section of this **Handbook**. Many of the vendors on the Vendors of Technology list will provide you with a free catalog.

The AT Network, affiliated with the Department of Rehabilitation and the Alliance for Technology Access, is a statewide project which promotes access to assistive technologies, related services, and information to enable people with disabilities to be successful, independent and productive. You may also wish to contact the AT Network for referral to sources of assistive technology in your community at: (800) 390-2699. For additional information on the AT Network, refer to the “Vendors of Assistive Technology” listed in the “Directory of Resources” section of this **Handbook**.