

Video Services for the Blind and Visually Impaired Population

“Full enjoyment of television, videos and other forms of popular culture has been denied to people with visual impairment; now the technology is available to turn that situation around.”

Who’s Watching? A Profile of the Blind and Visually Impaired Audience for Television and Video (American Foundation for the Blind, 1997)

For 12 million blind and visually impaired Americans, 1990 marked a new era promising fuller access to television programming through an innovative service called Descriptive Video developed by Boston public broadcaster, WGBH. In this service, specially added voice-over descriptions convey key visual elements in a program that a visually impaired viewer would ordinarily miss. These descriptions are carefully inserted into the natural pauses in dialogue, and do not interfere with the soundtrack. Actions, costumes, gestures and scene changes are just a few of the crucial elements described—vital information that helps to engage the blind viewer with the story.

Described programs and films inform and entertain people who previously were previously unable to gain access to a medium which continues to define our culture as we enter the 21st century. Description is now also available in other forms of media including theatrical releases, live theatrical performances, multimedia content on Web sites and training videos. The terms “video description,” “audio description”, and “narrative description” are sometimes used interchangeably. For the purpose of clarity, the term “video description” is used throughout this chapter.

Background of Video Description

Descriptive video is the brainchild of Dr. Barry Cronin of WGBH. When stereo television was developed in 1984, Cronin began seeking ways to provide broadcast services to all audiences via the second audio program channel (SAP) available on stereo TVs and VCRs. Cronin recalled an announcer named Whispering Smith on a New York television station bowling show, who would describe what was happening for the viewer. Cronin realized a similar concept could be used for blind and visually impaired people by employing the new audio channel to broadcast narrated descriptions.

In the late '80s, Cronin and WGBH, already a pioneer in developing television captioning for deaf and hard of hearing viewers in the 70s, worked with The Metropolitan Washington Ear, Inc. which had been providing "live" audio-description of stage performances since the 1981. Other organizations also began applying this audio description concept for video formats including the Narrative Television Network (NTN) in 1989 and the late Gregory Frazier's AudioVision.

In 1990, WGBH launched Descriptive Video Service[®] (DVS[®]), as a free national service. (Note: Descriptive Video Service and DVS are registered trademarks of WGBH/Boston). Blind and visually impaired audiences were overwhelming enthusiastic about the service and immediately began lobbying for more described programs. During these years, the availability of closed captioning was mushrooming (the major broadcast networks first announced 100% of prime-time and then virtually their entire schedules as accessible to

deaf and hard-of-hearing viewers). Blind people began to question why the concept of accessible TV programming did not include them and their families.

Since 1990, DVS has described more than 1,600 PBS programs including *The American Experience*, *Arthur*, *ExxonMobil Masterpiece Theatre*, *Mystery!*, *Nature* and more than 80 films for the Turner Classic Movies cable channel including *Casablanca*, *Citizen Kane*, *National Velvet* and *King Kong*. DVS narration is available to home viewers who turn on (or select) the SAP channel; the regular program audio is unaffected for those who don't activate SAP. Second Audio Program reception and audio playback is a standard feature on most television sets and VCRs built since 1990.

DVS also provides more than 200 openly described home videos through funding by the U.S. Department of Education and arrangements with most of the major Hollywood studios. These videos are available via direct mail and for loan at over 1,200 libraries nationwide.

In 1993, in partnership with the Corporation for Public Broadcasting, the CPB/WGBH National Center for Accessible Media (NCAM). NCAM was established at WGBH as a research and development facility designed to extend the Boston public television station's previous media access efforts into new media, and to further the uses of captioning and video description in the home, classroom, workplace, and community. Current projects involving video description include Web access efforts, distance learning access standards work, recently published design guidelines for making

educational software accessible and "eDescription"— creating longer, enhanced descriptive passages that will give blind and visually impaired children more context and richer language and cultural learning opportunities.

An additional description service provider, the Narrative Television Network (NTN), describes selected episodes of television series including *Bonanza*, *Matlock*, *The Andy Griffith Show* and *The Streets of San Francisco* which appear on the GoodLife TV cable network (formerly the Nostalgia Channel). NTN programs are normally provided with open description, meaning there is no need for use of the SAP feature. With open description, sighted viewers do not have the option to turn off the added narration. NTN also provides a selection of public domain movies as openly described VHS videos for libraries and other institutions to copy and return at no charge. These videos are available at web site <http://www.NarrativeTV.com>.

Major support for DVS and NTN comes from the U.S. Department of Education.

DVS also raises funds from foundations, corporations and individuals.

Audience for Video Descriptions

It is estimated that more than 12 million visually impaired people can benefit from descriptive video, according to the American Foundation for the Blind (AFB) and other professionals in the field of blindness and visual impairment. AFB has analyzed a variety

of data on blindness and visual impairment and has written a widely used resource manual on the subject. (Packer and Kirchner 1997, 1998; Kirchner 1988)

The figure of 12 million visually impaired persons is based primarily on an annual measure collected by the Health Interview Survey (HIS) of the National Center for Health Statistics (NCHS). It includes people with any problem in seeing that is not correctable with ordinary glasses or contact lenses. Some basic demographic characteristics about the non-institutionalized visually impaired population have been reported; for example, most are elderly and female. Also, the non-white population's rate of vision loss is higher than for whites of all ages.

Among the estimated 12 million in the target population for video description, there is, of course, a wide range of visual loss or impairment. Nearly 400,000 people report they are blind in both eyes; 45,000 persons in nursing homes are reported to be totally blind. (LaPlante 1988).

The National Center for Health Statistics indicates that eye problems now rank third, after heart disease and arthritis, among chronic conditions that restrict the normal daily activities of people older than 65. The National Eye Health Education Program (NEHEP) (<http://www.nei.nih.gov/nehep>), a program of the National Eye Institute/National Institute of Health and Human Services, states "Over 60 million Americans are at high risk of losing their eyesight to glaucoma or diabetic eye disease." For glaucoma, this

includes African Americans over age 40 and everyone over age 60, and for diabetic eye disease, all people with diabetes.

Other Populations - Elderly

Throughout the history of research and development in media access technologies, many valuable alternate uses of video description have been encountered. Like captioning, audiences outside of the core have turned to the service for their own needs.

One additional audience for description can be found in the elderly population. Many of these people experience losses in vision as a natural result of the aging process, but are unlikely to identify themselves— or be identified— as visually impaired. While many older people are reluctant to use assistive devices, the discreet nature of descriptions and the fact that no special equipment is needed, increase the likelihood of use among this population.

Other Populations - Learning Disabled

Films and videos that contain video description appear to be especially well-suited to the needs of children with learning disabilities. Because the medium has high visual appeal along with rich audio description, it has a great potential for both capturing a child's attention and enhancing information processing. By providing similar information in two modes, described video capitalizes on the different perceptual strengths of learning-

disabled (LD) children, utilizing their stronger learning capability and pairing it with their less-developed modality to reinforce their comprehension of information. From a teacher's perspective, the learning acquired through viewing educational videos in the classroom could be particularly meaningful for LD students.

Since so little work has been done in the field of video description for students with learning disabilities, WGBH sought to test the concept by interviewing 22 professionals in the fields of learning disability, attention disorders and head injury; 17 watched a described videotape sampler before the interview (NCAM 1995). Experts noted that video description supplies multiple extra cues about what's important during the program, and about how people interact, including visual and behavioral cues. It was felt that this additional information may help LD students grasp or figure out causal links for themselves.

The consensus among the study's professionals, who were familiar with non-verbal learning disabilities, was that this population is likely to benefit greatly from described videos, especially descriptions that provide focus on body language, gesture, and facial expression. These subtle behavioral nuances, while challenging for students to interpret, are essential for understanding the dynamics of social interaction. Nonetheless, further research is needed to determine specific effects and benefits of video description for individuals with learning or cognitive disabilities.

Other Populations - Non-disabled

One viewer wrote to WGBH's DVS department with the following comment:

"Even though my wife and I are fully sighted, as are our two children, we have found that the concise but colorful descriptions of the action on the screen helped us to enjoy our programs with a whole new dimension of perception. Often the narrator describes little details that we would certainly have missed, details which enhance our viewing pleasure. Our children have also increased their working vocabulary and have learned to be more observant participants in the shows they watch with DVS."

- Ira Marc Goldberg, Los Angeles, CA

Descriptions can also be useful when a viewer is doing several things at once, needs to attend to something, or leaves the room during a program. While these uses are not the original intent of the service, they need to be taken into account when considering the potential audience for and potential benefits of video description.

This has certainly been the case for closed captioning: the majority of beneficiaries of this now pervasive service are people who watch captions in health clubs, sports bars, airport lounges and other places where ambient audio makes captioned TV an idea solution.

Federal Mandates for Described Television and Cable Programming

In conjunction with a national celebration of the tenth anniversary of the Americans with Disabilities Act (enacted July 26, 1990; see see <http://www.usdoj.gov/crt/ada/adahom1.htm>), the Federal Communications Commission (FCC) recently took steps to increase the accessibility of television to persons who are blind or visually impaired.

On July 21, 2000, the FCC voted to mandate the provision of described programming on TV stations (ABC, CBS, Fox, NBC affiliates) in the top 25 major markets, effective between April and June 2002.¹ The new rule requires participating broadcasters to provide a minimum of 50 hours of described prime-time and/or children's programming per calendar quarter, which is approximately 4 hours per week.

Multi-channel video programming distributors (MVPDs)— such as satellite and cable systems— with at least 50,000 subscribers will follow the same guidelines for each of the top five national non-broadcast networks they carry. PBS stations already air approximately 10 hours of described programming per week and are exempt from the new rule.

Incorporated into the rule is the mandatory broadcast of accessible emergency announcements (e.g., storm warnings) by all TV stations and MVPDs that typically provide local emergency information. This requires that the crucial details of emergency announcements be made accessible to those living within the affected local area who are blind or visually impaired, effective 60 days after the rule is published.

Similar mandates to increase the amount of closed captioned programming to nearly 100% by 2006 are now in place. For further information on efforts to increase the amount of accessible television and cable programming, visit <http://access.wgbh.org> or the FCC's web site, <http://www.fcc.gov>.

LIBRARIES AND THE BLIND/LOW VISION COMMUNITY

The following are some fundamental questions that might help in thinking about library services and collections for blind and low vision members of the community.

How does a viewer watch DVS on television?

A viewer must live within range of a PBS station that carries DVS and must have a stereo TV or a stereo VCR that includes the Second Audio Program (SAP) feature, standard on most newer stereo televisions and video cassette recorders. Inexpensive receivers that convert TV sets to stereo with SAP also can be purchased. Viewers who subscribe to cable should ask the cable company to "pass through" stereo with SAP.

How does a viewer find out if they have SAP capability?

To find out whether or not a TV or VCR has SAP capability, consult the owner's manual. Most TVs or VCRs purchased within the past 7 years are SAP equipped. To hear the narrated visual descriptions via a stereo TV or VCR, simply activate its S.A.P. feature.

A S.A.P. receiver is a device that is able to tune in, similar to a radio, a S.A.P. channel. It can be used with or without a TV depending on whether or not you want to receive the video picture. These are available either pre-tuned or adjustable.

The following companies produce S.A.P. receivers:

Compol, Inc. (pre-tuned) (800) 972-0881
<http://www.compolinc.com/>

Avocet Instruments, Inc. (pre-tuned) (800) 443-0728
<http://www.avocetinst.com>

FM Atlas* (adjustable) (218) 879-7676
<http://members.aol.com/fmatlas/home.html>

*This device can also receive Radio Reading Services (see International Association of Audio Information Services web site [<http://www.ukans.edu/~arnet/arrslinx.htm>] for listing of radio reading services)

Where are DVS television broadcasts available?

DVS is broadcast free to viewers by 168 participating public television stations reaching 80% of US television households. To carry DVS, a station must be equipped to broadcast in stereo with SAP.

How does a viewer get described movies on home video?

Over 200 described popular Hollywood movies and PBS programs are available for purchase by direct mail. A viewer needs only a regular VHS video cassette recorder (VCR) and a television to watch these videos and hear the descriptions. The SAP feature is not required. DVS home videos are also available for loan at over 1,200 public libraries nationwide.

Which television programs, feature films and video releases are described?

Television - Currently, you can find descriptions on select PBS programming including *Arthur*, *ExxonMobil Masterpiece Theatre*, *Nature*, *NOVA* and *Zoom*.

Cable - WGBH's Descriptive Video Service has described over 80 feature films which run on the Turner Classic Movies cable network, including the DVS Showcase offered every Sunday evening at 6:00pm (ET). The DVS Showcase has offered classics such as *Casablanca* and *North by Northwest*.

NTN has described selected episodes of popular series such as *The Andy Griffith Show*, *Matlock* and *The Streets of San Francisco* which appear on the GoodLife TV cable network.

Feature Films - Through WGBH's Motion Picture Access efforts (or MoPix), DVS has provided descriptions for 20 first-run film releases, including *Star Wars Episode 1: The Phantom Menace* and *The Patriot*, in time for their debut in theaters equipped with the

DVS Theatrical[®] system. In addition, more than 20 described films are now in distribution at IMAX[®], OMNIMAX[®] and other large-format theaters.

Home Video - DVS sells described videos through a direct mail catalogue that offers more than 200 titles including new and classic feature films and public television titles.

DVS Home Videos are also available for loan at over 1,200 libraries nationwide. WGBH is working to ensure description tracks are included in future DVD releases as well.

The Web - Narrative Television Network offers descriptions of a sizable number of films now in the public domain on their Web site, www.NarrativeTV.com.

A sample list of described programs, home videos and films can be found in the "Resources" section below.

How is a program or video described?

WGBH's describers watch the program and write a script describing key visual elements. They carefully time the placement and length of the description to fit within natural pauses in the dialogue. After a script is completed; it is edited by a post-production supervisor for continuity, clarity and style conventions.

Narration is recorded and mixed with the original program audio in a unique "mix to pix" process to create a full DVS track. The DVS track is then laid back to the master either on a spare audio channel (for broadcast) or to a separate DVS master (for home video

distribution). For descriptions intended for large format or theatrical films, a full program mix is not created. The descriptions are kept as a separate track and delivered to theaters as part of the motion picture sound track.

What special skills do describers have?

Describers are a diverse group of individuals, among them former educators, writers, trained musicians and avid travelers. They possess degrees in a variety of fields, but share key skills for describers. They must be tireless researchers, demonstrate strong writing skills, and be very detail oriented. When hired, each describer undergoes an extensive training program.

In what other venues are descriptions provided?

Descriptions are available for selected live theater productions, for museum exhibits and for live events such as parades.

Resources: Major Video Description Providers and Information Resources

American Foundation for the Blind

11 Penn Plaza
Suite 300
New York, NY 10001
212 502-7600
800 232-5463
212 502-7777
Email: afbinfo@afb.org
<http://www.afb.org>

Descriptive Video Service

Media Access Group at WGBH

Boston:

25 Western Avenue

Boston, MA 02134

(617) 300-3600

<http://main.wgbh.org/wgbh/access>

To request a DVS Guide or Home Video Catalogue in Braille, call toll free: 1 888 818-1181, or in large print, call toll free: 1 888 818-1999. To hear an audio version of the catalogue, or to obtain taped information about DVS, call 1 800 333-1203.

access.wgbh.org

WGBH/Los Angeles

300 E. Magnolia Blvd.

2nd Floor

Burbank, CA 91505

818 562-3344

WGBH/New York

475 Park Avenue South

10th Floor

New York, NY 10016

212 545-0854

Metropolitan Washington Ear, Inc.

35 University Boulevard East

Silver Spring, MD 20910

301 681-6636

301 681-5227

Email: washear@his.com

<http://www.his.com/~washear/>

Narrative Television Network

5840 South Memorial Drive, Suite 312

Tulsa, Oklahoma 74145-9082

1 800 801-8184

(918) 627-1000

(918) 627-4101

<http://www.NarrativeTV.com>

Major Consumer Organizations/Blind and Visually Impaired Population

American Council of the Blind

1155 15th Street, NW, Suite 1004

Washington, DC 20005

(202) 467-5081 (800) 424-8666

Fax: (202) 467-5085

National Association of Parents of Children with Visual Impairments

P.O. Box 317
Watertown, MA 02272-0317
(800) 562-6265
Fax: (617) 972-7444
<http://www.spedex.com/NAPVI>

Narrative Television Network (NTN)

5840 South Memorial Drive, Suite 312
Tulsa, Oklahoma 74145-9082
(800) 8014; (918) 627-1000
Fax (918) 627-4101
Email: webmaster@narrativetv.com
<http://www.narrativetv.com>

National Center for Accessible Media (NCAM)

Email: ncam@wgbh.org
<http://main.wgbh.org/wgbh/pages/ncam>

National Federation of the Blind

1800 Johnson Street
Baltimore, MD 21230
(410) 659-9314
(410) 685-5653 fax
<http://www.nfb.org>

Access Related Web-based Listservs

Audio Description List (AUDIODESCL) - The list for audio description, allows describers, consumers, presenters and others to create a network in the international community now using description services. To subscribe, send an e-mail message to listproc@lists.acs.ohiostate.edu. The body of the message must contain only the following line: subscribe audiodescl Yourfirstname Yourlastname.

Media Access List - A list for all topics relating to media access, including captioning and description. Members include service providers, consumers, advocates, television

industry members, educators and more. To subscribe, send an e-mail message to listserv@listserv.heanet.ie. The body of the message must contain only the following line: subscribe access.

Sample list of described home videos

The African Queen

Apollo 13

Basic Instinct

Casablanca

E.T.

Gone with the Wind

Irving Berlin's White Christmas

L.A. Confidential

The Lion King

The Nutty Professor

Saving Private Ryan

Shakespeare in Love

Shindler's List

The Terminator

Toy Story

Unforgiven

The Wizard of Oz

You've Got Mail

Sample List of Public Domain Titles described on <http://www.NarrativeTV.com>

Angel on My Shoulder

Father's Little Dividend

Life With Father

My Favorite Brunette

Meet John Doe

Of Human Bondage

The Snows of Kilimanjaro

The Scarlet Pimpernel

The Third Man

Sample list of DVS-described broadcast programs

The American Experience

Arthur

Between the Lions

Exxon Mobil Masterpiece Theatre

Exxon Mobil Masterpiece Theatre American Collection

NOVA

Mystery!

Nature

Scientific American Frontiers

Wishbone

Zoom

Sample list of DVS classic films shown on Turner Classic Movies cable network

Casablanca

Doctor Zhivago

Meet Me in St. Louis

A Night at the Opera

North by Northwest

Now, Voyager

The Philadelphia Story

On the Town

Sample list of DVS Theatrical feature film and large format film* releases:

*Africa: The Serengeti**

Big Daddy

Charlie's Angels

Cider House Rules

*Dolphins**

Dinosaur

Michael Jordan: To The Max

Titanic

*T Rex**

Mask of Zorro

Star Wars Episode 1: The Phantom Menace

Stuart Little

The Vertical Limit

NOTES

Mention of a product or service in this chapter does not constitute endorsement by Descriptive Video Service. Our intent is to increase awareness of items that may be helpful to viewers.

1. "Implementation of Video Description of Video Programming" (47 CFR Part 79) appears in *the Federal Register*, 2000. vol 65, no. 176 (September 11). For the text of this Report and Order and other documents pertaining to it, see <http://www.fcc.gov/cib/dro/video-description.html>. For discussions of this mandate and its implications for users, see "FCC Adopts Rules." 2000.

REFERENCES

"FCC Adopts Rules for Video Description." 2000. *Journal of Disability Policy Studies* v11, n2 (Fall):127.

Kirchner, Corinne. 1988. *Data on Blindness and Visual Impairment in the U.S.: A Resource Manual on Social Demographic Characteristics, Education, Employment and Income, and Service Delivery*. New York: American Foundation for the Blind..

LaPlante, Mitchell P. 1988. *Data on Disability from the National Health Interview Survey, 1983-85*. Washington, DC : National Institute on Disability and Rehabilitation Research

Packer, Jaclyn, and Kirchner, Corinne. 1998. "Executive Summary: Project to Conduct Research on Described Video's Audience and Methods of Distribution." (U.S. Department of Education Grant). http://www.igc.org/afb/dv_exec.html

Packer, Jaclyn, and Kirchner, Corinne. 1997. *Who's Watching?: A Profile of the Blind and Visually Impaired Audience for Television and Video*. New York: American Foundation for the Blind.