

# What's New in Assistive Technology

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*With contributions from the Tools for Life Team and Network*

*Tools for Life  
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*[www.gatfl.gatech.edu](http://www.gatfl.gatech.edu)*

AADD Partners  
Atlanta, GA  
2016

# Agenda



Technology innovations are emerging at a rapid pace from wearables to robotics and mobile apps to connected homes. Much of this technology holds great promise for the future of independent living.

We will present current research projects to products on the market that have the potential to improve independence and improve quality of life.

For Handouts: <http://www.gatfl.gatech.edu/tflwiki>



# AMAC Accessibility



AMAC creates practical solutions that work, with a focus on utility, ease of use, and high quality.

- **Accessibility Consulting** focuses on organizational accessibility needs with evaluation, technical assistance, customer support, and website accessibility solutions.
- **Braille Services** produces customized projects from both print materials and electronic text including partial books and chapters or graphics only using cutting-edge technology.
- **Captioning Services** makes classrooms, meetings, labs and other audio environments fully accessible for deaf or hard-of-hearing.
- **Professional E-Text Producers** provide high-quality e-text in many formats such as PDF, DOC, DAISY, and HTML.
- **Certified Assistive Technology team** provides on-site and remote assessments, demonstrations, training and technical assistance for education, work, and daily living environments.

# Tools for Life Mission



We're here to help Georgians with disabilities gain access to and acquisition of assistive technology devices and assistive technology services so they can live, learn, work, and play independently in the communities of their choice.



# Tools for Life & TFL Network



- **TFL developed Georgia's Plan for AT**
- We serve individuals of all ages & all disabilities in Georgia
  - Over 50,000 thru various activities throughout the year
- **TFL Network**
  - Assistive Technology Resource Centers/Outreach Sites
  - Lending Libraries
  - Training and Demonstrations
  - AT Reuse
  - AT Funding Education and Resources
- **Online Resources**
  - [www.gatfl.org](http://www.gatfl.org) - 5,000 unique visitors a month





# The TFL Network is Growing!



# Come Visit Us!



[HOME](#) [ASSISTIVE TECHNOLOGY](#) [TFL NETWORK](#) [CALENDAR OF EVENTS](#)



Search our Site

Go

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[MEET THE TFL TEAM](#)

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ADVISORY COUNCIL](#)

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[Welcome](#) [AT Services](#) [Try AT](#) [Get AT](#) [AT Guides](#) [Research](#)



**CUSTOMIZED AT TRAINING**  
for Individuals or Groups



## Welcome to Tools for Life

Tools for Life, Georgia's Assistive Technology Act Program, is dedicated to increasing access to and acquisition of assistive technology (AT) devices and services for Georgians of all ages and disabilities so they can live, learn, work and play independently and with greater freedom in communities of their choice.

Tools for Life and the TFL Network work collaboratively together to accomplish our mission through:

## 2014 GATE SEMINAR

**DEC  
5**

Georgia Tech Student Center

## WEBINARS

**OCT  
29**

[Lighting the Path: A Guided Discussion on AT for Dementia](#)

**NOV  
6**

[Unlocking Communication in the Severely Impaired Child](#)

[Current Webinar Schedule](#)

[Webinar Archives](#)

## TOOLS FOR LIFE APPFINDER



...for Living, Learning, Working, and Playing

## AT ONLINE EXCHANGE



## AT FUNDING GUIDE

**DOLLARS & SENSE**  
NAVIGATING THE AT FUNDING STREAM



# TFL AT Demo Lab

- Tablets
- Vision & Hearing
- DME
- Communication
- Games
- Software
- Switches
- Keyboards
- More!





# AT Acquisition!



- Tools for Life endeavors to break down the barriers which prevent individuals with disabilities, their families, and service providers from acquiring and effectively using Assistive Technologies to gain greater independence.
- To insure that AT products are available to Georgians with disabilities
- Eliminate Funding Barriers



# AT Funding Solutions



## Dollars & Sense

- Web-based Funding Guide
- A resource for locating funding sources for AT devices and services.



## gTrade

- Free resource for finding and exchanging assistive technology (AT) devices online
- Place an ad requesting items for sale, donation, or needed



## Credit Able, Georgia's Alternative Financing Program

- Purchase assistive technology equipment and services



# Join us for Webinars and Visit our Archives!



## Tools for Life Online Professional Development

- Tools for Life offers online professional development to help you learn more about assistive technology strategies and solutions as well as the most recent information on AT devices and disability related issues and trends.
- Webinar content and materials are developed and presented by one of the Tools for Life team members along with other regional and national leaders in the assistive technology community.
- To join the TFL mailing list to receive our email announcements, visit [www.gatfl.gatech.edu](http://www.gatfl.gatech.edu)

# What is Assistive Technology?



**Assistive Technology Device is any item, piece of equipment or product that is used to increase, maintain or improve functional capabilities of individuals with disabilities.**

*Public Law 105-394 [29 USC 2201]*

## Low/No-tech

- pencil grip
- adapted books
- slant board
- highlighters, tape
- magnifiers
- color coding
- read to out loud
- picture schedule
- strategies for memory
- colored transparencies
- Proof readers
- note taker

## Mid-Tech

- word prediction
- text to speech
- speech to text
- spell checkers
- talking calculators
- digital recorders
- organizers
- e-books
- adapted keyboard
- adapted mouse
- adapted toys
- CCTV
- apps under \$100

## High-Tech

- computer/laptops
- tablets/phablets
- smartphones,
- smartpens
- OCR scanner/software
- magnification software
- speech output devices
- switch, joystick access
- scanning access
- voice recognition
- environmental control devices
- apps over \$100



# Why Assistive Technology?

- For a person without a disability, technology makes ~~things~~ Life easier.
- For a person with a disability, technology makes ~~things~~ Life possible.



# History of AT in Legislation



- 1980's and 90's, the civil and education rights of individuals with disabilities were strengthened.
- "...for all individuals, technology can provide important tools for making the performance of tasks quicker and easier, but for some individuals with disabilities, assistive technology is a necessity that enables them to engage in or perform many tasks."



# “Nothing about us without us.”



- Disabled Persons Organizations (DPO) rightly believe that unless they can influence decisions that remain excluded from mainstream life and development and be merely the passive recipients of aid and assistance from governments or other sources.
- Active participation of persons with disabilities in decision making: “Nothing about us without us.”



# Assistive Technology Laws



- There are a wide range of laws and policies related to assistive technology (AT) services and devices.
- Following are brief summaries of laws that impact the provision of assistive technology and special education services.
- Federal laws are amended regularly.



# Assistive Technology Laws: AT Act



## **Assistive Technology Act of 1998**

### **Public Law 105-394 [29 USC 2201]**

- The Assistive Technology Act, also known as the “Tech Act” provides funds to states to support programs for:
- The establishment of assistive technology (AT) demonstration centers, information centers, equipment loan facilities, referral services, and other consumer-oriented programs
- Protection and advocacy services to help people with disabilities and their families, as they attempt to access the services for which they are eligible
- Programs for alternative financing options to help people with disabilities purchase needed assistive technology.



# Assistive Technology Act of 2004



- With the 2004 edition, the Act now required States to provide direct services to individuals with disabilities to ensure they have access to the technology they need.
- As a result, the majority of State efforts are required to be conducted in the following areas:
  - assistive technology reutilization programs,
  - assistive technology demonstration programs,
  - alternative financing programs
  - device loan programs



# Outcomes of the AT Act of 2004



- Due to the efforts of the State Tech Act Programs, millions of Americans with disabilities are able to go to work, go to school, participate in recreation activities, and be contributing members of their communities.



# CATADA

## Center for Assistive Technology Act Data Assistance Website



The CATADA logo consists of a stylized 'C' made of three overlapping shapes in blue, green, and red, followed by the text "CATADA" in a bold, sans-serif font.

Center for Assistive Technology Act Data Assistance

Home About Contact us

- Home
- Generate Data Summary
- State AT Program Information
- AT Program Activity Participation
- National Activities Publications
- AT Program Resources

Tweets by @catada\_jo

A small circular profile picture of a person with short dark hair, wearing a blue shirt, next to the name "catada" and the handle "@catada\_jo".

Julie Nesbit & LATAN Honored, [conts.co/15CUn7o](#) via [@constantcontact](#)

A small circular profile picture of a person with short dark hair, wearing a blue shirt, next to the name "catada" and the handle "@catada\_jo".

After the race, what happens to all the campaign signs? [BostonGlobe.com/lifestyle/2016/...](#) via [@BostonGlobe](#)

A small circular profile picture of a person with short dark hair, wearing a blue shirt, next to the name "catada" and the handle "@catada\_jo".

After the race, what happens L... [Ugh professor Thomas Williams...](#) [bostonglobe.com](#)

A small circular profile picture of a person with short dark hair, wearing a blue shirt, next to the name "catada" and the handle "@catada\_jo".

Community Inclusion [@Chickster](#)

Read this take on "When Wheelchairs Are Cool" from the [@nytimes](#): [nyl.me/W77Yr0D](#)

## CATADA

A circular graphic containing a bar chart with three vertical bars of increasing height from left to right, colored red, blue, and green respectively.

## Welcome

State and Territory Assistive Technology Programs focus on improving the provision of Assistive Technology (AT) through comprehensive, statewide programs that are consumer responsive. The goal of these programs is to increase access to and acquisition of AT. Programs serve people with all types of disabilities, of all ages, in all environments.

Assistive technology devices are items, pieces of equipment, or product systems that are used to increase, maintain, or improve functional capabilities of individuals with disabilities. AT's primary purpose areas are education, community living, employment and IT.

### IT & Telecommunications

This includes computers, software, websites, telephones, office equipment, and media. With the appropriate AT devices, individuals with disabilities can access information more easily.

This 86-year-old tech-savvy individual became even more tech-savvy after getting help from the Wyoming AT Program. [Read Leland's story.](#)

Prev 1 2 3 4 Next





# Staying off the FAST Track!



- ✓ **Frustration**
- ✓ **Anxiety**
- ✓ **Stress**
- ✓ **Tension**



# Effective AT Assessment



- Uses a feature-match approach
- Incorporates on-going educational/life planning
- Hanging out with Intent
- Targets natural environments
- Utilizes the competencies of multiple team member
- Demands meaningful follow-through

# AT Helps!



- Assistive Technology strategies and solutions can help support those living with disabilities, the aging population and those who have problems with:
  - speaking
  - hearing
  - seeing
  - moving around
  - getting places
  - memory
  - cognition (thought processes and understanding)
  - daily living activities, such as dressing and preparing meals
  - socializing.



# DXT Fingertip Vertical Wireless Mouse

- Ergonomic relaxed neutral wrist and hand position
- Precision grip for accurate navigation
  - Small muscles and joints of the fingers have higher processing abilities
- Instantly switch between right and left hand





# Tobii Eye Mobile

- Hands free access to Windows 8 Tablets
- Navigate, communicate, play using your eyes
- Supports switch and touch inputs
- Small and Lightweight



# Bestic Feeder



- Bestic can best be described as a small, robotic arm with a spoon in the end that can easily be maneuvered.
- Bestic is small and compact, has an attractive, discreet design and is very quiet which makes it blend into the dining environment in a natural way.
- By choosing a suitable control device, the user can independently control the movement of the spoon on the plate and choose what and when to eat.



# T. Jacket

- Wearable technology vest
  - Provides customizable deep touch pressure
    - Uses adjustable air pressure compression controlled via smartphone app
    - <http://www.mytjacket.com/>



# Lechal Haptic In Soles

- Connects to smartphone via Bluetooth technology
- Foot gestures and voice commands
- Navigation via vibration of the soles, i.e.: left sole turn left
- <http://lechal.com/products.html>



# Lumo Lift

- Lumo for back and head/shoulders
- Sends gentle vibration alert when posture needs to be corrected
- <http://www.lumobodytech.com/>



# Memory

- Reminder Rosie
  - Alarm Clock
  - Personal Voice Reminder
  - Easy to use



- MedCenter System
  - Organizer with Reminder System
  - Monthly display
  - Alarm
  - Talking





# Medication Management

- Automatic medication dispenser
  - Holds 29 doses
  - Set up to 4 alarms per day
- Pillpac.com
  - Organized pills packaged by pharmacy
  - Sealed pouches for each day
  - Time stamped
  - Lessen medication errors



# Talkitt

- Enables people who have motor, speech, and language disorders to easily communicate using their own voice
- Translates unintelligible pronunciation from any language into understandable speech
- <http://www.talkitt.com/>



# Pixie

- Maps all of the digital things in your life
- Place a pixie chip on any device and map will tell you it's precise location
- <https://www.getpixie.com/>



# Amazon Echo

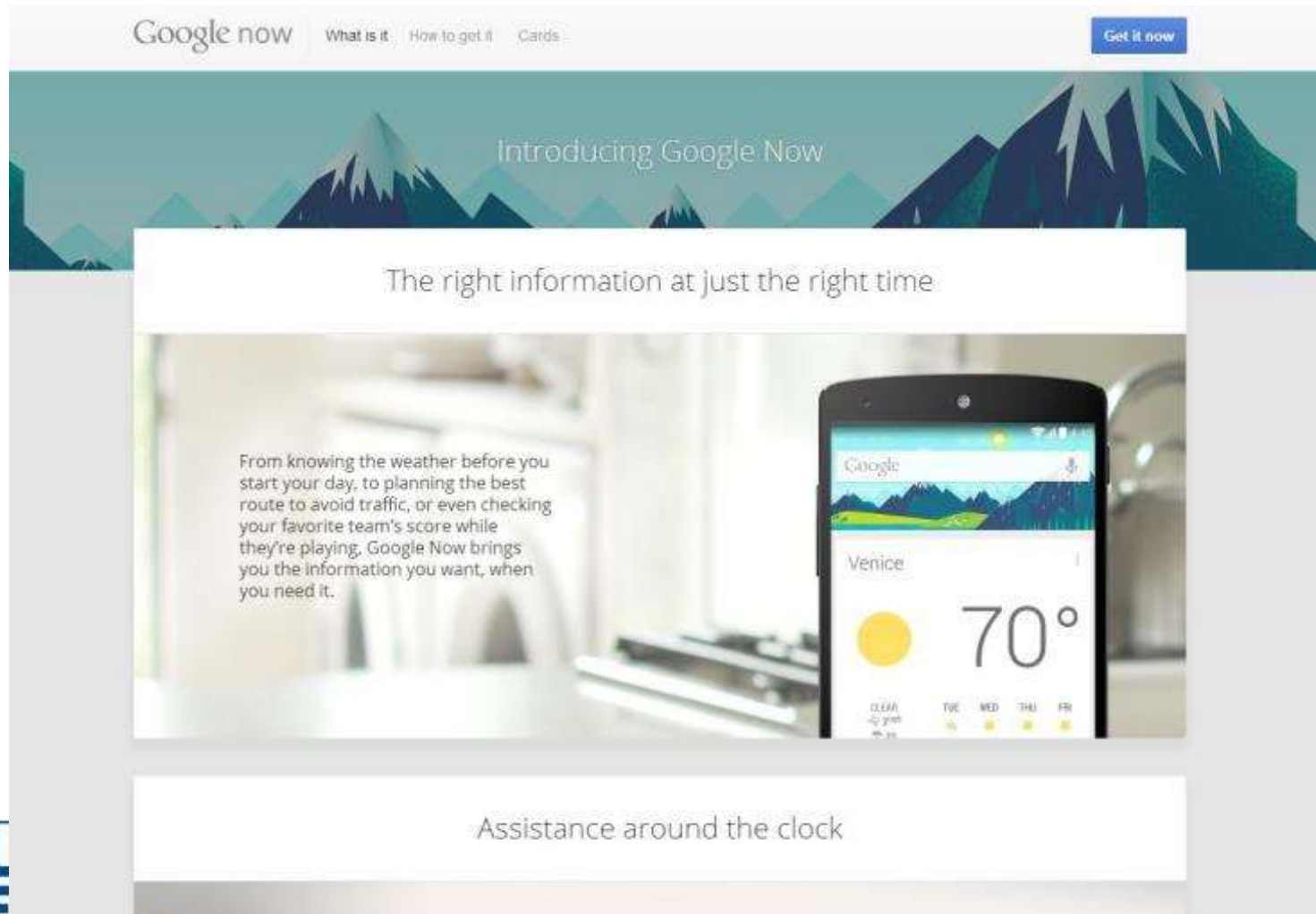
amazon echo

Always ready, connected, and fast. Just ask.



- Speech-controlled speaker system
- Voice recognition - further distances
- All functions are server side
- Compatible with many EC Brands
- \$179.99

# Google Now




Google now    What is it    How to get it    Cards    [Get it now](#)

## Introducing Google Now

The right information at just the right time

From knowing the weather before you start your day, to planning the best route to avoid traffic, or even checking your favorite team's score while they're playing, Google Now brings you the information you want, when you need it.



Assistance around the clock

# VGo Telepresence Robot

- Enables a person to be in one location and have the freedom to move around in another location as if they were physically there.
- Reduces travel costs
- School
- Hospital
- Work Remotely





## Solutions

- Overview
- Products and Services
- Benefits
- Applications
  - Healthcare
  - Large Enterprise
  - Manufacturing
  - Education
  - SMB

## Quick Links

**Request Info**  
**Drive a VGo**  
**Latest VGo News**  
**Download VGo App**

## People with Disabilities in the Work Place

Sector: **Business**



VGo increases productivity and effectiveness while lowering costs by enabling a person to get to a location instantly and easily. VGo is not designed as a replacement for in-person interaction but rather as the next best alternative to "being" in the workplace. VGo also eliminates the deficiencies associated with other video solutions that are locked to a TV or computer monitor by providing 100% remote controlled mobility. [delete that](#)

In addition to "being" at work from home, VGo can help people who can get to the workplace, but who cannot practically move about the facility or campus. A VGo can be used to enable a person to move around in one part of the facility while they are physically in another.

### The benefits of using VGo in the workplace include

- Getting to places previously inaccessible increases opportunities
- Freedom of movement increases personal interaction with others
- Quality of life improvements by expanding the work and social environments
- Costs can be reduced by lowering or eliminating select transportation expenses, and by communications and speeding decision making



# Kubi



- Dock your tablet for remote pan and tilt controls
- See and interact with people during a conference call
- Use any Video Client: Skype, FaceTime, Google Hangout, etc.
- Cloud Control

# Romo



# TFL Gaming Initiative



- There are many benefits to playing games
  - Improved Hand/Eye coordination
  - Increased problem solving and cognitive function
  - Better handle stressful environments
  - Social outlet
- Tools for Life has recognized the importance of play and is starting an initiative dedicated to gaming with disabilities. Some objectives of the program are:
  - Demonstrate the accessibility of gaming
  - Build relationships with developers and aid in creating more accessible games
  - Increase public awareness of the importance of accessibility in games

# Xbox One with Kinect



- Control your entertainment with your voice
- Netflix, Skype, Youtube, Internet Browser, Music, Television, etc.
- Gesture Control
- Price varies depending on bundle.
- Xbox One ~ \$350
- Kinect ~ \$100

# Playstation 4 Media Console



- The PS4 isn't just a gaming console. It is a multimedia center.
  - Apps
  - Internet Browser
  - Social Network
  - Voice Control
  - Controller Input vs Keyboard and Mouse
- Sony recently updated their firmware for the Playstation 4 **media** console. This update included many new accessibility features appearing on a device of this kind for the first time ever.
  - Remap Inputs
  - Magnification
  - Font Customization
  - Color/Contrast control/inversion





# Environmental Controls



The vera logo, consisting of the word "vera" in a green sans-serif font with a small green leaf icon above the 'v'.

HOMEPRODUCTSAPPSABOUT USBLOGSUPPORTBUYCONTROLHow It Works

VeraLite

Smart Home Controller

Home / Controllers / VeraLite

DescriptionFeatures & SpecsWarranty & Support

YOUR NEW ASSISTANT

HOME CONTROL DOESN'T HAVE TO BE COMPLICATED OR EXPENSIVE, SO WE CAME UP WITH THE VERALITE SMART CONTROLLER, WHICH IS SIMPLE AND INEXPENSIVE. IT MAY BE SMALL, BUT IT'S CAPABLE OF BIG THINGS!

- Easily manages up to 70 devices
- Plug and play with your Internet connection
- Controls over 750 smart products of all kinds
- Custom text and email alerts for any situation

A small, sleek, silver-colored smart controller device with a screen displaying a user interface.

VeraLite gives you easy control over lights, cameras, thermostats, door locks, alarm systems and more. Plus you easily can add intelligence to almost anything electronic in your home, and VeraLite can control them too. All the smart home benefits you've been looking for are right here in this easy, inexpensive add-on to your home network.

A small, sleek, silver-colored smart controller device with a screen displaying a user interface.

AN AMAZING AMOUNT OF SMART TECHNOLOGY THAT FITS IN THE PALM OF YOUR HAND.

VeraLite gives you easy control over lights, cameras, thermostats, door locks, alarm systems and more.

ONLY \$179.95

WHAT'S IN THE BOX

A small icon of an envelope, indicating an email link.



# TFL Environmental Control Lab



# TFL AppFinder



## Search by:

✓ **App Name**

✓ **Categories**

- Book
- Education
- Environmental Adaptations
- Hearing
- Cognition, Learning, Developmental
- Navigation
- Personal Care and Safety
- Productivity
- Communication
- Therapeutic Aids
- Vision

# Rapid SOS One-Touch-911



- Alert emergency responders even if you can't speak or don't know your location
- Enter your relevant medical information and demographic data
- Uses HTTPS, SMS, or native dialing
  - Connects over any medium-
  - Bluetooth
  - Data
  - Wifi
  - SMS
- Packages your data and routes it to local first responders
- [www.rapidsos.com](http://www.rapidsos.com)



# TapTapSee

- Designed to help people with low vision identify objects they encounter in their daily lives.
- Double tap the screen to take a photo of anything, at any angle, and hear the app speak the identification back to you.
- Requires VoiceOver to be turned on.





# SkyGrid

- Personalize news events by categories
- Simple interface
- Free
- [www.skygrid.com](http://www.skygrid.com)





# iZen Garden



- Choose from 100s of objects, plants and creatures to place in your garden
- Rake the sand and share your creations
- Helps you to center your mind, relax your psyche and relieve your stress



**Our Question to You:  
What have You Learned today?**

# The Tools for Life Team



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Georgia's Assistive  
Technology Act Program

## *Disclaimer*

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**Thirsty for More?  
Additional  
Solutions and  
Information**

# Assistive Technology Laws: ADA



## Americans with Disabilities Act ( ADA )

### Public Law 101-336 [42 USC 12101]

- The ADA prohibits discrimination on the basis of disability in employment, state and local government, public accommodations, commercial facilities, transportation, and telecommunications.
  - Title I addresses employment, saying that any employer who has 15 or more employees must offer “equal opportunity” to employment-related activities.
  - Title II applies to state and local governments, and insists that people with disabilities be given equal access to public education, employment, transportation, recreation, health care, and other areas under their control.
  - Title III addresses public accommodations that may be provided by private companies, including private schools, restaurants, stores, hotels, doctors’ offices, etc.
  - Title IV addresses assistive technology specifically, as it requires that telephone companies provide the necessary services to allow people who are deaf or hearing impaired to use telecommunications devices.



# AT Laws: Section 508



- Section 508 of the Rehabilitation Act requires that all electronic and information technologies developed and used by any Federal government agency must be accessible to people with disabilities.
- This includes websites, video and audio tapes, electronic books, televised programs, and other such media. Individuals with disabilities may still have to use special hardware and/or software to access the resources.



# Assistive Technology Laws: IDEA



- Individuals with Disabilities Education Act (IDEA).
- The Individuals with Disabilities Education Act (IDEA) was initially passed in 1975, and 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.



# AT Laws: Telecommunications



## Telecommunications Act of 1996

- Title I - Public Law 104-104 [47 USC 255]
  - This law requires that telecommunications equipment and services be accessible to and usable by persons with disabilities.
- Title III - Public Law 104-104 [47 USC 613]
  - Discusses rules on closed captions and video descriptions of video programming.



# More Outcomes of the AT Act of 2004



- A summary of these accomplishments is compiled by the Association of Assistive Technology Act Programs; complete copies of each State Plan can be found at the National Information System for Assistive Technology.

