Choosing the Right Path and Leaving a Trail: Exploring Assistive Technology and Accessibility

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GLASS Conference
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www.gatfl.gatech.edu
www.amacusg.org
The world around is evolving at an astounding rate. Assistive Technology, or AT, has been foundational in this evolution and a catalyst for positive life-changing results for individuals with disabilities. AT can increase opportunities for education, social interactions, and employment especially when there is a focus on technology like tablets, apps, wearables and robotics.

This presentation will provide a brief overview of TFL, the TFL Network, resources on accessibility, and tips for including AT in Georgia’s libraries. Join us for a discussion on what's new in AT, in the AT community and explore where we were, where we are, and where we are going.

Handouts available at: http://www.gatfl.gatech.edu/
AMAC Accessibility is a social change organization on a mission to create affordable services for governmental, private and non-profits organization working with individuals with disabilities. Services include e-text, braille, captioning, assistive technology, office management software and consulting.
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.

For more information, please visit our website at [www.amacusg.org](http://www.amacusg.org)
Mission

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

• Disability is a natural part of the human experience and in no way diminishes the right of individuals to:
  • (A) live independently;
  • (B) enjoy self-determination and make choices;
  • (C) benefit from an education;
  • (D) pursue meaningful careers; and
  • (E) enjoy full inclusion and integration in the economic, political, social, cultural, and educational mainstream of society in the United States.

Public Law 108-364
Tools for Life
Georgia’s Federal AT Act Program

• 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 & Outreach Centers
    • Lending Libraries – 1,153
    • AT Training – 2,150
    • AT Demonstrations – 1,320
    • AT Reuse – 3,331 at a value of $1,975,478
    • Public Awareness/Resources – 4,029,868
    • Funding - Credit Able – 22 devices loaned at $147,716 value

• Online Resources
  • www.gatfl.gatech.edu – Average 5,000 unique visitors a month
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.
TFL Statewide Activities

• Assistive Technology Awareness
• AT Reuse
  • FODAC - DME and computer reuse
• Funding Education and Assistance
  • Dollars & Sense, gTRADE, 1-800#
• AT Training, AT Demonstration, ATRCs
• Monthly Webinars
• Tools for Life Conferences and Collaborations
Conferences

IDEAS Conference, June 2-5, 2015

- St. Simons @ Epworth by the Sea
- Over 120 workshops and educational sessions
- Call for proposals is open!
- Interactive Exhibit Hall! Experience hands-on AT demos
- For more information visit the TFL website: www.gatfl.gatech.edu
TFL Network - Where we were
Now – Where we are!
Your TFL Network is Growing!
TFL AT Demo Lab - Where we were

• Tablets
• Vision Items
• DME
• Communication
• Games
• Software
• Switches
• Keyboards
TFL AT Demo Lab – Where we are!
Come Join us in the AT Lab all day!

Explore innovative AT Solutions
Defining Assistive Technology

Assistive technology – “Any item, piece of equipment, product system, whether acquired commercially, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities.”

Public Law 108-364
Why Assistive Technology?

- For a person without a disability, technology makes things easier.

- For a person with a disability, technology makes things possible.
What is Assistive Technology?

Assistive Technology Device
...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
AT Helps!

• Assistive Technology strategies and solutions can help support those living with and affected by dementia 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.

For Handouts: [http://www.gatfl.gatech.edu/tflwiki](http://www.gatfl.gatech.edu/tflwiki)
The “FAST” Track

- Frustration
- Anxiety
- Stress
- Tension
Moving from Information to Action
ADA Celebrates 25 years!

Introduction to the ADA

Publications and videos that answer these questions and more: Who is the ADA? Who is a person with a disability? Who must comply with the ADA? Where can you call to ask questions about the ADA?

ADA Enforcement Activities

The Department enforces the ADA through complaints, lawsuits, consent decrees, settlement agreements, and alternate dispute resolution procedures.

ADA.gov/Olmstead

Instructions for filing a complaint with the Department of Justice and for requesting accommodations for the filing process.

Find Information on ADA.gov

Search ADA.gov

More Search Options

New on ADA.gov

LSAC
Stipulation to Extend Claims Period (posted 3/19/15)

Dentex Dental Mobile, Inc.
Settlement Agreement (posted 3/13/15)

City of Jackson, Mississippi
Motion to Revise and Extend Consent Decree (posted 3/11/15)

Williams v. City of New York
Statement of Interest (posted 3/9/15)

Opus 465 and Tresca
Settlement Agreement (posted 3/4/15)

Rapid City, South Dakota
Project Civic Access Agreement (posted 3/2/15)

New ADA Online Complaint Form
Filing an ADA Complaint Electronically (posted 3/2/15)

Washington County, Missouri
Project Civic Access Agreement (posted 2/18/15)

Days Inn & Conference Center Tulsa
Consent Decree (posted 2/9/15)

LSAC | PDF

Rainforest Café
Settlement Agreement (posted 2/4/15)

City of DeKalb, Illinois
Settlement Agreement (posted 2/3/15)

City of Fallon, Nevada
Settlement Agreement (posted 2/3/15)

City of Palmetto, South Carolina
Settlement Agreement (posted 2/3/15)
Assistive Technology in Georgia’s Libraries

- What does it look like?
- AT Tool kit
- Accessibility check
- Accessible workstation
Tools for Life Innovative Design Award

Hours of Operation
Monday - Thursday: 10:00 am - 8:00 pm
Friday and Saturday: 10:00 am - 6:00 pm
Sunday: 1:30 pm - 6:00 pm

Address:
3000 Macon Rd
Columbus, Georgia 31906
Phone: 706-243-2669 or 1-800-652-0782
FAX: 706-243-2710 Manager: Stephen Pharis

Circulation
Main Line: 706-243-2680
Jeannine Scott, Department Head
706-243-2669, ext. 2639

Reference Department
Main Line: 706-243-2687
Meeting Rooms: 706-243-2701
Wanda Edwards, Department Head.
Exploring AT Solutions
Ergonomics

• Inhibits blood flow
• Creates muscle shortening
• Stresses back muscles and compresses spine
• Can inhibit learning
• Compresses diaphragm
  – Affects breathing
  – Voice quality
Sit-To-Stand Desks

- People come in many heights
- Adjustable to fit the user
- People may use wheelchairs
- Different kinds of wheelchair
- More enjoyable experience

- Varying Kinds
  - Manual
  - Electronic
  - Unique designs

- Different Costs
Ergotron WorkFit-S

- Sit-to-stand desk
- Attaches to table top
- Easy to move up and down
- Extra tray for items under 5 lbs
- Mouse and keyboard on same tray
Electric Adjustable and Tilt Desks

- Positioning the work closer the student can improve visual access
- Promote upright trunk posture
- Improve head posture

Desktopdesk.com; $375
Monitor and Mount Positioning Benefits

- Centered on desk
- The top of monitor should be at eye level allowing text on screen to be at or slightly below eye level
- Positioned arms lengths away unless visual acuity issues
- Use document holders
- Minimize glare
Chairs

- Proper height for desk or height adjustable if possible
- Thighs should not be in contact with the front edge of the seat
- Adjust the chair so feet are flat on the floor and thighs parallel to the floor
Lighting

• Adding a desk lamp is simple and can make a difference

• Natural Lighting
  – Softer
  – Some individuals are prone to eye fatigue and headaches

• Ott Light
  – Different styles
AT Solutions for Reading & Writing
Low Tech Solutions

• Built up grips
  – Variety
  – Create your own using tennis balls
• Larger / thicker pencils
• Electronic Spellers
  – Franklin Spellers
Low Tech Solutions - Pens

- “The Penagain takes a novel ergonomic approach to ink pen design. The body of the pen is shaped like a "Y" creating a cradle for the index finger to rest in.”
  [http://ergonomics.about.com/od/buyingguide/fr/frpenagain.htm](http://ergonomics.about.com/od/buyingguide/fr/frpenagain.htm)

- Wide barrel pens can make it easier for some people to write due to their contoured shape. With a Fat Ergonomic Pen there’s more surface area to grip which makes it easier to write.
Live Scribe Pen

- Records what it hears and what you write
- Uses specific paper for playback
- Connects to computer by USB for saving
- Tap on note and playback from there
- Jump forward and back in notes
- Dictionary
- Translation Apps
- Purchase Apps online
- Demo
Kurzweil 3000

- Text-to-Speech software
- Helps improve reading speed and comprehension
- Note taking capabilities
  - Different color highlighters
- firefly
  - Access many features of Kurzweil through the internet
  - firefly demo
- Free download trial
  - www.kurzweiledu.com
  - Kurzweil 3000 Demo
WYNN

- What You Need Now
- Freedom Scientific
- Scanning and Reading software
- Highlights text as spoken
- Icon friendly
- Built in study tools

- Internet Features
TextHelp

- Text-to-Speech software
- Helps improve reading skills
- Built in text and picture dictionaries
- Study skills highlighter
- Google Chrome version
- [www.texthelp.com](http://www.texthelp.com)
TextHelp for Google

- Open a webpage within the Chrome Browser
- Click on the Read&Write for Google icon to open up the toolbar (click on the icon again to close out the toolbar later)
Ginger

• Online grammar and spell checker
• See corrections as you type or use Ginger Proofreader to scan the entire document for mistakes
• Reads corrections out loud

• Android app available
  Works within MS Word and email
• Text to Speech
  – Read emails and docs
  – Can choose voice and accent
• Ginger Demo
Voice Input Solutions
2015 Software Review

**Voice Recognition Software Review**

**Rankings**

- **#1**: Dragon Professional
  - Price: $599.99
  - **READ REVIEW**
  - **VISIT SITE**

- **#2**: Dragon Premium
  - Price: $199.99
  - **REVIEW**
  - **VISIT SITE**

- **#3**: Dragon Dictate
  - Price: $149.99
  - **REVIEW**
  - **VISIT SITE**

- **#4**: Dragon Home
  - Price: $99.99
  - **REVIEW**
  - **VISIT SITE**

- **#5**: Voice Finger
  - Price: $9.99
  - **REVIEW**
  - **VISIT SITE**

- **#6**: VisiTalk
  - Price: $45.00
  - **REVIEW**
  - **VISIT SITE**

- **#7**: e-Speaking
  - Price: $14.00
  - **REVIEW**
  - **VISIT SITE**

- **#8**: Tasti
  - Price: $29.99
  - **REVIEW**
  - **VISIT SITE**

Displaying 2 - 8 of 8

**Ratings**

- Overall Rating: 9.90
- Dictation: 9.65
- Features: 9.57
- Commands: 9.00
- Help & Support: 7.03
- Other: 6.85
- Additional: 6.70
- Extra: 6.50

"Tools for Life"

Georgia's Assistive Technology Act Program
Speech Recognition Software

- Turn spoken words into text
- Connect with the timing of your thoughts
- Dictation speed 70 to 100 words per minute
Word Q / Speech Q

• Software that has built-in word prediction
• Suggests words
• Spoken feedback to hear what was written
• Speech Q is a plugin for Speech Recognition
• 30 day free trial
• http://www.goqsoftware.com/trial/
wordQ + speakQ

wordQ is a simple but brilliantly designed writing solution that improves with you, regardless of your age or writing ability.

Now available, Linguistically aligned dictionaries and speech feedback for English, French, and Spanish speakQ plug-in takes everything you love about WordQ and adds forgiving speech recognition in the mix.

- Lets you type the words you know and use voice to text to say the ones you don’t, from single words to entire paragraphs
- Lets you type the words you know and use voice to text to say the ones you don’t, from single words to entire paragraphs
- Speech recognition helps you write everything you say from single words to entire paragraphs
- Offers suggestions for words you have difficulty pronouncing
- Train its voice recognition to understand your voice, with no reading required
- Allows you to mix typing and speaking for best results
- No voice commands to remember

Works in all these and more:
- Word prediction works even if words are spelled creatively or missing parts
- Offers a list of words with similar meaning to add variety to your writing

wQ: Use > arrow key to show/hear usage example indicated by the triangle

New Tip
Know Your Apps and Tablets
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
Apple iPad, iPad mini and iPod Touch

- Multi-touch screen
- New iOS 8
- Millions of apps
- Surf web
- iTunes
- Videos
- Organization
- Accessibility
- Books
- Photos
- Speakers
- 5.0 megapixel camera
- Starts at $329
Samsung Galaxy

- Download Accessibility Features
- 7 inch or 10 inch screen available
- Compatible with flash
- SIM card for storage
- Starts at $199.99
Google 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
Surface Pro 3

Microsoft Surface

Why Surface ▾ Products ▾ For Business ▾ Where to Buy ▾ Support ▾

Surface Pro 3 ▾ Power and performance ▾ Best of a tablet ▾ Windows, Office, and Apps ▾ Great Pen experience ▾ Buy now

Ready to switch? Trade up your MacBook Air for a Surface Pro 3 now.

See offer

PORTABILITY

Surface Pro 3
Weighs a mere 2.4lbs and is only 0.55" thin with the keyboard attached

13" MacBook Air
Tips the scales at 2.96lbs and is 0.68" thick

PROCESSING POWER

Choose from Intel® Core™ i3, i5, or i7 processors

Available with Intel® Core™ i5 and i7 processor options

MULTITASKING

With Windows 8.1 Pro, you can snap up to 3 apps or desktop programs side by side to multitask with ease

OS X offers no support for snapping 2 apps side by side, but does allow you to multitask.
iOS 8 – released in 2014

Our smartest keyboard ever.

iOS 8 makes typing easier by suggesting contextually appropriate words to complete your sentences. It even recognizes to whom you’re typing and whether you’re in Mail or Messages. Because your tone in an email may be different from your tone in a message.

Learn more ›
Universal Design For Learning And Accommodations

Voice Dream

• Text to Speech
• Highlights as it reads
• Import
  – Bookshare
  – Dropbox
  – Gutenburg
  – Word Doc
  – PDFs
• Buy different voices
• Change rate of speed

• Download for later reading
• $9.99
Umano

- News read to you by real people
- Make a playlist of articles
- Download to listen to offline
- Upgrade to premium for $3.99/month
- Free
BARD Mobile

• Access directly to the National Library Service for the Blind and Physically Handicapped (NLS)
• Must be registered
• Settings
• Can use with braille display
• [http://www.loc.gov/nls/find.html](http://www.loc.gov/nls/find.html)
• Free
Perfect OCR

- $3.99
- Uses the built-in camera to scan documents
- Edit, copy, store, email documents
- Upload to online storage is as Evernote
- Does take practice for picture
Magnify

- FREE
- Turns Android phone into a digital magnifying glass with built-in flashlight
- Can use gestures anywhere on the screen:
  - Double-tap: Zoom out/in
  - Single-tap: Focus
  - Long-press: Turn light on/off
iHomework

• Keep up-to-date with your school work, grades, to-do's, teacher's information

• School organizer that can be with you anywhere you go, whether that be on your iPhone/iPod touch, iPad, or Mac
Grocery IQ

- Pictorial shopping list
- Customize different lists for different users using pictures on camera roll
- Add your own items and categories
- Assign item prices
- Assign item locations (for example, aisle numbers)
- Several accessibility options
  - text-to-speech
  - uses large easy-to-see images
  - item prices automatically totaled
- $4.99
iMovie

- Share information via Facebook, Twitter, Email, or SMS
- Upload photos
MyMedSchedule

- Keep track of medication
- Reminders
- Refill Reminders
- Healthcare Provider Profiles
- Insurance Information
- Allergies
- Works across Platforms
- Free

www.mymedschedule.com
Breathe2Relax

- Portable stress management tool
- Detailed information on the effects of stress on the body
- Instructions and practice exercises to learn the stress management skill called diaphragmatic breathing
What's New in AT and the AT Community
acceptance. Contexts for the discussion will include aging-in-place and health care.

Presentation 2: Human-Robot Interaction: The Potential to Support Successful Aging

There is much potential for robots to support older adults in their goal of independent aging. However, for human–robot interactions to be successful, the robots must be designed with user needs in mind.

In the Human Factors and Aging Laboratory, Roger’s lab is conducting research in the nascent field of older adult–robot interactions. In this presentation, Rogers will provide an overview of the needs, capabilities, preferences, and limitations of older adults. She will then discuss our current and planned research on the design of robots to support older adults and health care providers. Our focus is on understanding the interactions among user characteristics, robot characteristics, and the context of the interactions (e.g., task demands).

Presentation 3: Aware Home Technology to Support Aging-in-Place

Imagine if your home were “aware” of your activities so that it might help you remember what it was you went into the kitchen for or whether the visitor at the front door is someone you know or even what the proper procedure is for performing a recently learned home medical procedure. An aware home is not from the world of science fiction—it is within the realm of science. Such technological developments have the potential to enable older adults to maintain their functional independence and to “age-in-place.” They also have the potential to support families caring for children with developmental disabilities or individuals recovering from illness or injury. An innovative research program at Georgia Institute of Technology is focused on developing psychological and computer science to support home activities.

The presentation will include examples of health care technology, communication technology, and memory supports. These examples demonstrate the complexity of the issues involved in designing the computationally capable home of the future and provide direction for future research and development efforts.

Speaker Background:

Rogers is Professor in the School of Psychology at Georgia Institute of Technology. She received her B.A.
VGo Telepresence Robot

- Enables a person to replicate themself in a distant location and have the freedom to move around as if they were physically there
- Reduces travel costs
- School
- Hospital
- Work from home
People with Disabilities in the Work Place

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.

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

![Image of VGo in the workplace](image-url)
School of Electrical and Computer Engineering

Tongue Drive System (TDS):
A Brain-Tongue-Computer Interface

Intraoral Tongue Drive System (iTDS) Technical info
Nod by Nod, Inc

- Controls devices remotely
- Change presentation slides
- Type notes
- Environmental Control Units
- $149, Early 2015

https://hellonod.com/
Amazon Echo

• Speech-controlled speaker system
• Voice recognition - further distances
• Timers, news, information
• Invitation only
• $199, $99 Prime members
MINDRDR FOR GOOGLE GLASS LETS YOU TAKE AND SHARE PICTURES JUST BY THINKING
Questions
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