Assistive Technology Strategies & Solutions for Living with Neuromuscular Diseases

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www.gatfl.gatech.edu
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)
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
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 Centers
  - Lending Libraries
  - Training and Demonstrations
  - AT Reuse
  - AT Funding Education/Assistance and Resources
- Online Resources
  - www.gatfl.org - 12,000 unique visitors a month
Come Visit Us!
Direct AT Service Activities

• Web-based Funding Guide

• A resource for locating funding sources for AT devices and services. This guide was developed to make the funding process easier and to assist consumers in getting the assistive technology they need.

• New resources added frequently!
DOLLARS & SENSE
NAVIGATING THE AT FUNDING STREAM

Please use the drop-down lists below to search...

Age Groups Served
- Show all ages

Geographic Areas Served
- Show all geographies

Serves People with the Following Disabilities
- Show all disabilities

Type of Funding Provided
- Show all funding sources

Types of Services Provided
- Show all services provided

Search
Direct AT Service Activities

- FREE resource for finding and exchanging assistive technology (AT) devices online
- Place an ad requesting items for sale, donation, or needed
- gTRADE and Tools for Life encourages members to offer AT devices and information for sale or by donation to others who may benefit from using technology and equipment no longer in need by others
- This online equipment exchange program was developed to make AT devices and services available and accessible to Georgians with disabilities

www.gtradeonline.org
Staying off the FAST Track!

- Frustration
- Anxiety
- Stress
- Tension

- Lee & Phillips
Assistive Technology Matching: A Team Approach

- The Person with the disAbility
- Circle of Support – Family of Choice
- Case Managers
- Technologist
- Occupational Therapist
- Speech & Language Pathologist
- Physical Therapist
- Engineer
Tools for Life AT Demo Lab

- Tablets
- Vision Items
- DME
- Communication
- Games
- Software
- Switches
- Keyboards
Google Glass

- Wearable Technology
- Bluetooth Connection
- Navigate
- Make a Call
- Send a Message
- Take a Picture or Video
- Get the News
- Search
- Google Play Music
- Google Now
- Be Social
- Internal Compass
- $1500
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, Roger’s lab 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.
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
TFL Environmental Control Lab
School of Electrical and Computer Engineering

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

Intraoral Tongue Drive System (iTDS) Technical info

Clinical Trial Completed
If you have tetraplegia, live in Atlanta, GA or Chicago, IL, and interested in participating in the upcoming clinical trials, please do contact Dr. Ghovanloo.
LOMAK
Light Operated Mouse and Keyboard

• Hand or head pointer controls a beam of light that enters, then confirms, function
• Confirmation of keys reduces errors and increases the speed of operation
• Keyboard can be operated with small movements and does not require a lot of energy

• [www.lomak.co.nz](http://www.lomak.co.nz)
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 Switches Between Right and Left Hand
• Video
Eyegaze Edge

- Eyegaze System
- Control computer and tablet using your eye
- Environmental Controls
- Communication
Automatic Feeder

- Mealtime Partner
- Different mounts
- Battery operated
- Bowl tops controls amount of food
- Control Pause time between spoonful
- Adjustability of the spoon
Picture of the Mealtime Partners Mounted on the Support Arm

Individuals who have limited range of upper body control or who fatigue easily from the effort of controlling their body movement should use *the Partner* mounted on the Support Arm. The Support Arm allows *the Partner* to be positioned so that the spoon, when extended out from the device, is positioned very close to the user’s bottom lip. With *the Partner* positioned this way, the user only has to lean forward slightly to take food off of the spoon, thus the user exerts very little effort.
Utensils
Switch Access
Communication
Computer Access
Seating and Positioning
Mounts

- RAM
- ErgoMart
- (RJ Cooper Magic Arm)
Mobile devices

- Explore various mounting options to hold mobile devices
- Helps with posture
- Operate wheelchair or other mobility aid safely
- Builds confidence
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
Dragon for Android

**Dragon Mobile Assistant**

- Speak to send a text, email, or call
- Set reminders
- Search the Internet
- Program to listen only to your voice
- Free

**Swype**

- Alternate Keyboard
- Draw from one letter to the other without lifting a finger
- Reduces finger movement/fatigue
Remote Mouse

• Turns your mobile phone or tablet into a wireless remote control for your computer
• Fully simulated mouse
• Magic trackpad
• Multi touch Gestures
• Landscape mode
MessagEase Keyboard

• Keyboard has large letters
• Change the colors
• Type using a Swype gesture
• Change the keyboard layout
• Lookup dictionaries to find the right spelling.
• Change the size, shape, haptic feedback
• FREE
Shopping List Generator

- 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
Sleep Cycle

- Tracks your sleep patterns
- Uses iPhone accelerometer to track how often you move at night
- Set an alarm range
- Woken up gradually when you are in like sleep
- Feel refreshed and energized
- $2.99
Bump

• Use Bump™ to share contact information and photos by simply bumping two phones together.
• Just open Bump, hold your phones, and gently bump your hands together.
• Free!

Demo
Reading Apps

• Free Books
  – Free
  – Over 23,000 titles
  – Audiobooks

• Newspaper
  – Free
  – Newspapers from 150+ countries
  – Over 20,000 newspapers

• Overdrive Media Console
  – Free
  – Must have library card
  – Download ebooks and audiobooks on the go
Go Read

- FREE accessible e-book reader for people with print disabilities
  - Android 2.2 Froyo and above
- Access and download books directly from Bookshare
- Read with voiced navigation and text-to-speech
- Read books in DAISY 3 text and EPUB 2 formats
Reminders

- Built-in App
- Works with VoiceOver
- Organize your reminders
- Siri if have iPhone 4s or 5
- The new iPad
TextMinder

• Create SMS text reminders
• Specify exact date and time; choose a repeat schedule for each reminder
• Multiple reminders can remain in popup notification summary, even when followed by other messages (push notifications only show your most recent alert)
• Unread reminders show as a number badge on your standard SMS/Messages app, and remain until removed to ensure they are noticed
Speak it!

- Copy emails, documents, web pages, PDF files, and more; paste them into Speak it!, and have the text spoken back to you.
- Email text to speech files
- Make announcements over PA system
- Endless phrases and possible uses
- $1.99
Ultra Magnifier

• Turns Android Phone into an FlashLight Ultra Magnifying Glass with fullscreen by using camera zoom and auto-focus
• To get the most of the application, place your phone’s camera 10 cm away from an object to gain perfect focus
• Support Negative color, Negative Sepia, Negative Mono, Negative Aqua, Negative Solarize effect
• Free
Speaker Boost

- Boost your speaker or headphone sound volume
- FREE
ICE

In Case of Emergency

- Emergency contact list
- Central place for you to record any medications
- List allergies or medical conditions
- Pre-loaded medical information to choose from
- Free
- www.ice-app.net
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
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
Preparation for the Future

• Get Ready!
  – All of the solutions, helpful tools and strategies that I learned throughout the years are helping me to be successful today!
  – Let your environment work for you!
Our Question to You:
What have You Learned today?
Contact

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