Assistive Technology Strategies & Solutions for Aging Well

Carolyn Phillips
With contributions by Liz Persaud & Martha Rust

www.gatfl.org www.amacusg.org
Welcome to the Assistive Technology revolution! The world around us is evolving at an astounding rate. Assistive Technology developments have been foundational in this evolution and a catalyst producing positive life-changing results for individuals with disabilities. This talk will present what’s new in AT and in the AT community as we explore where we were, where we are, and perhaps, where we are going.

For Handouts: [http://www.gatfl.gatech.edu/tflwiki](http://www.gatfl.gatech.edu/tflwiki)
Why Am I Here Today?

- Master Our Skills!
- Expand Our Knowledge and
- Build Stronger Schools to Create an amazing, Inclusive and United Community!
AMAC

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)
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
Tools for Life Network

- AT Lending Library
- AT Evaluations & Training
- AT Demos
- Resource and Assistance
- AT Funding Assistance
- DME Reuse
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:

- AT Demonstration
- AT Evaluations and Assessments
- AT Funding Options & Education
- Access to the TFL AT Lending Libraries
- AT & Durable Medical Equipment Reuse

Understanding Your Options to Get the AT You Need

WEBINARS

FEB 6  Choosing Core AT Inventory for the Classroom
FEB 18  Two Peas in a Pod: IEP Objectives & Standards Based Instruction
MAR 6  TFL & Center for AT Excellence TBD

Current Webinar Schedule
Webinar Archives

TOOLS FOR LIFE APPFINDER
...for Living, Learning, Working, and Playing.

AT ONLINE EXCHANGE

AT FUNDING GUIDE
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
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Current Webinar Schedule
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TOOLS FOR LIFE APPFINDER

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

AT ONLINE EXCHANGE

gTRADE

AT FUNDING GUIDE

Webinar Updates & Schedule
Liz Persaud
Get a Financial Loan to purchase AT

The CFII - The Center for Financial Independence & Innovation, Inc. (The CFII) is a nonprofit organization dedicated to helping individuals with disabilities and their family members advance their financial independence and security.

Obtain AT through our AT Cooperative Buying Program

The Georgia AT Depot is a state-wide buying Cooperative for Assistive Technology for customers in the state of Georgia. The Georgia AT Depot is modeled after the Maryland AT Co-op, which has operated a successful cooperative buying program since 1998. The Georgia AT Depot is a collaborating partner with the Maryland Co-op. In this way we can provide Georgia customers the best discounts possible.

Obtain Reused/Gently Used AT Devices

gTRADE, Georgia's Online Equipment Exchange, encourages members to offer AT and DME for sale or donation to others who may benefit from using technology unneeded by others.

FODAC - Friends of Disabled Adults and Children (FODAC) is Georgia's statewide provider of home health and durable medical equipment. FODAC has distributed 20,000 wheelchairs and thousands of other pieces of DME since 1986. Internationally, 65 countries have received some equipment over those years.
Tools for Life AT Demo Lab

- Tablets
- Vision Items
- DME
- Communication
- Games
- Software
- Switches
- Keyboards
Ageing in Place: Questions to Consider

- Entrances
- Hallways
- Staircases
- Kitchen
- Bathrooms
- Bedrooms
- Living room
- Storage Spaces
Safety questions for the exterior and entrances include:

- Is there adequate lighting to see walkways and entrances?

- Are steps in good repair and do they have non-slip surfaces?

- Are there handrails for the steps and are handrails securely fastened?

- Do the handrails run continuously from the top to the bottom of the entire flight of stairs?

~ Tammy Irion
Entrances

• Half-Step- consider using if the first step is too large, works for indoor and outdoor stairs

• Anywhere lighting- Such as stick-n- click or Push on Lights to brighten up dark staircases

• Skid resistant indoor/outdoor rugs/mats

• Keyless locks

• Handrails/ grab bars
Staircases

• Stair lifts - look for one with a seat configuration that is height-adjustable, compact and folds up (so others in your house can use the stairs). The ideal stair lift should also have a full backrest for maximum seated comfort.

• Half-Step - consider using if the first step is too large, works for indoor and outdoor stairs

• Anywhere lighting - Such as stick-n-click or Push on Lights to brighten up dark staircases
Hallways

• Anywhere lighting- Such as stick-n- click or Push on Lights to brighten up dark staircases

• Skid-resistant rugs

• Smoke alarm for deaf/hard of hearing

• Organize cords- cost efficient use toilet paper rolls
Strategies & Solutions for...Storage

• If possible, locate all storage areas within the shoulder to waist area, eliminating the need to bend down or to stand on tiptoe.

• As with doors, replace cabinet and drawer hardware with handles, pulls, and latches that are easier to grasp with one hand and that do not require tight grasping, pinching, or twisting.
Strategies & Solutions
Kitchen

• Install turntables for easy access of items.

• Install easy-glide pull-out shelving to decease the need for reaching and bending.

• Adapt or replace knobs on appliance controls to a larger size for easier use.

• Install ground fault interruption outlets.
Kitchens

- Automatic soap dispensers
- Automatic trash cans
- Automatic appliances (can openers)
- Jar grippers/Jar openers
- Adaptive utensils/ cups/ plates
- Adaptive cutting boards
- Fire alarm for deaf/ hard of hearing
- Motion sensor faucets
- Smart appliances (fridge)
- Pill reminder with alarm
- Pullout drawers for cabinets
- Push on lights
- Reachers
- Talking scales
- Color coded measuring cups/ spoons
- Longer sleeved pot holders
- Step stool
Modifications to Water Controls

• Install a single-handed control that controls both temperature and water flow.

• Install hot water feeds and draining pipes to prevent scalding.

• Install thermostatic valves to regulate water temperature and prevent scalding.
Living Room

- Non-Slip rugs
- Proper height furniture
- Remote for TV
- TV Ears
- Magifier
- Stands for books/tables/food
- Cords organized

- Lighting
- Environmental controls for Lights/blinds/etc
- Easy to reach phones
- Easy assist lift for chairs
Rearrange furniture closer to light switches or more lamps closer to beds.

Convert a room close to the bath and toilet rooms for convenient access.

Elevate the bed to allow for easier transfers on and off the bed.
Bedrooms

• Lighting
• Talking alarms
• Bed shaker
• Dressing stick
• Long handle shoe horn
• Easy to reach bedside lights
• Easy to reach phone

• Cord organizer
• Night lights
• Chair (for getting dressed if needed)
Bathrooms

- Non-slip floor/ tiles
- Automatic soap/toothpaste dispenser
- Universal quad cuff (tooth bush/ hair brush)
- Anti-fog mirror
- Grab bars
- Talking scales
- Lightening
- Shower chair
- Moveable shower head
- Chair (sit to do hair/ makeup)
- Heated floors
- Heated towel rack
- Floss Aide
- Automatic dryer
- Raised toilets
- Night lights
- Grippers for faucets
• Configure fixtures and accessories so a person can easily maneuver without obstructions.
• Install automatic faucets, hand dryers, and soap/shampoo dispensers for a person with limited hand function and upper-body strength.
• Use a shower curtain instead of a shower door for easier access to the shower.
• Install an anti-scald device and a hand-held shower head.
• Install ground fault interruption outlets.
Strategies & Solutions
Bathroom

• Install a wide, walk-in shower with no lip for wheelchair users.
• Lower counters for wheelchair users.
• Eliminate throw rugs and replace with non-slip flooring or non-slip mats.
• Install raised toilet seats for easier transfers.
• Install grab bars in the shower/bath and by the toilet for stability and safety.
• Position toilet flushing device and toilet paper within easy reach.
Looking Back to See Forward…

In 1990, the internet was something used by fantasy baseball fanatics on CompuServe and mobile phones were the size of toddlers — a luxury for those who could afford to not use pay phones. Satellite TV meant having a massive dish on your property; millions struggled with programming their VCRs to tape L.A. Law; bills were paid by check... in the mail.

By Chris Morran
# Comparing Tablets

<table>
<thead>
<tr>
<th>Property</th>
<th>Android</th>
<th>iOS</th>
<th>MS Windows</th>
<th>Amazon Kindle</th>
<th>Barnes and Noble Nook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number and variety of Tablets</td>
<td>Over 11,000</td>
<td>iPad and iPad mini</td>
<td>Several</td>
<td>Kindle Fire and Fire HD</td>
<td>Nook HD</td>
</tr>
<tr>
<td>Operating System</td>
<td>Android (Jelly bean)</td>
<td>ios7 (Sept 18, 2013)</td>
<td>Microsoft Windows 8</td>
<td>Modified version of Android ICS</td>
<td>Modified version of Android- Microsoft bought 2013</td>
</tr>
<tr>
<td>Apps</td>
<td>860,815 (AppBrain.com updated 9/13/13)</td>
<td>900,000 with 375,00 optimized for iPad/mini (mobileburn.com updated June 2013)</td>
<td>104,917 (winbeta.org updated July 4, 2013)</td>
<td>50,000 in Amazon App store also shop in Google Play Store (theverge.com updated August 2013)</td>
<td>10,000 in Barnes and Noble and have access to Google Play store (barnesandnoble.com updated August 2013)</td>
</tr>
<tr>
<td>Software Updates</td>
<td>As it becomes available on Google</td>
<td>Apple releases updates</td>
<td>MS releases updates</td>
<td>Amazon releases updates</td>
<td>Barnes and Noble releases updates</td>
</tr>
<tr>
<td>Interface</td>
<td>As designed by manufacturer</td>
<td>Icons and widgets designed by Apple</td>
<td>Metro style designed by Microsoft</td>
<td>Modified version of regular Android</td>
<td>Modified version of regular Android</td>
</tr>
</tbody>
</table>

[www.bluebugle.org](http://www.bluebugle.org) updated by TFL 2013
Android Device Fragmentation

July 2012: 3,997 Different Android Devices

July 2013: 11,868 Different Android Devices


Ben Satterfield
Future

• Evening out the playing field
• The Future is Contextual
  – GPS apps
  – Ads on Internet
  – Smart watches
  – Social Media
    • Proust.com

• Martha Rust
A way for you and your family to share and preserve your memories, one question at a time.

CREATE THE DIGITAL STORYBOOK OF YOUR LIFE
Locabulary

- Uses GPS to track user location and suggests appropriate vocabulary based on location
  - ie: McDonald’s starbucks
- A keyboard to type for text-to-speech
- User can tag their own locations and create vocabulary for each location
- Lite version Free; Pro version $130
TechSage (RERC)

• Funded by: National Institute on Disability and Rehabilitation Research (NIDRR), Dept. of Ed
• Timeline: Oct 1, 2013 – Sept 30, 2018
• Amount: $4.6 million ($925k/year) + ~ $1 million GT cost share
• Interdisciplinary: CoA (ID, GIS, AMAC), CoS (Psych), CoE (BME), CoC (HCI/HCC), IPAT (IMTC, Awarehome), GTRI, Emory Ctr. for Health in Aging, CS/Engineering USC
TechSage Mission

To conduct programs of advanced rehabilitation engineering (RE) and technical R&D to increase knowledge about, availability of, and access to effective, universally-designed technologies that enable people to sustain independence, maintain health, safely engage in basic activities of daily living at home and community, and participate in society as they age with disability.
Core Principles and Strategies

• Focus on People with Disability who are Experiencing Age-Related Limitations
• A Basis in User Needs
• UD as the Fundamental Goal of all Efforts
• Multi and Interdisciplinary Approach to Improving Rehabilitation Outcomes
• Research (Rogers)
  – R1. User Needs (Rogers, Fain, Jones)
  – R2. Effects of Hearing Loss (Bruce, Echt)
  – R3. Exercise Telerobotics (Mitzner, Beer)

• Development (Price)
  – D1. App Development
    • D1.1. Cognitive Training Game (Gandy-Kennedy)
    • D1.2. Route Planning App (Sanford, Guhathakurta)
    • D1.3. Mobile App to Measure Gait (Jones, Johnson)
  – D2. SmartBathroom Technologies (Sanford, Jones)
  – D3. Intelligent Robotics (Kemp)

• Training (Sanford)
  – T1. Online Education (Phillips)
  – T2. Post Secondary Education (Sanford)
  – T3. UD Competition (Rébola)

• Dissemination (Mitzner)
App Factory (D1)

The overall purpose of this project is to advance universal design in the wireless community. The objectives of this project are development, deployment, and adoption of software applications ("apps") to enhance the utility and usability of wireless products and services for wireless customers with and without disabilities.

App Factory output will include apps designed specifically to address barriers to wireless access and use by people with cognitive, physical, sensory, and/or speech disabilities. Wherever practical, these apps will incorporate features useful to all customers, with or without disabilities.

A complementary objective of this project is development of a practical model for consumer participation in the process of app development. This process engages the community of people with disabilities throughout the process of envisioning, designing, testing, refining, and disseminating applications.
Neuroplasticity research has established, beyond doubt, that instead of being a static cell mass, our brain is actually a dynamic system of neural networks that has the capability of significant growth under favorable circumstances.

Rudraprosad Chakraborty, M.D.
The brain is an amazing thing. Most of us have no idea what’s really going on inside our heads. Yet brain scientists have uncovered details every business leader, parent, and teacher should know.

Dr. John Medina - Developmental Molecular Biologist
THE NEW YORK TIMES:
“The power of positive thinking finally gains scientific credibility. Mind-bending, miracle-making, reality-busting stuff...with implications for all human beings, not to mention human culture, human learning and human history.”

OLIVER SACKS, MD:
“Fascinating. Doidge’s book is a remarkable and hopeful portrait of the endless adaptability of the human brain.”

THE LONDON TIMES:
“Brilliant...Doidge has identified a tidal shift in basic science...The implications are monumental.”

V.S. RAMACHANDRAN, MD, PHD:
“Superb. Brilliant. I devoured it.”
ABOUT THE BOOK

THE BRAIN CAN CHANGE ITSELF. It is a plastic, living organ that can actually change its own structure and function, even into old age. Arguably the most important breakthrough in neuroscience since scientists first sketched out the brain’s basic anatomy, this revolutionary discovery, called neuroplasticity, promises to overthrow the centuries-old notion that the brain is fixed and unchanging. The brain is not, as was thought, like a machine, or “hardwired” like a computer. Neuroplasticity not only gives hope to those with mental limitations, or what was thought to be incurable brain damage, but expands our understanding of the healthy brain and the resilience of human nature.

Norman Doidge, MD, a psychiatrist and researcher, set out to investigate neuroplasticity and met both the brilliant scientists championing it and the people whose lives they’ve transformed.
Overview of the Human Factors and Aging Laboratory

Points of Excellence

- Our research advances both science and practice
- We aim to improve quality of life for adults of all ages
- Students graduating from our lab are very successful

Resources

- Senior-to-Senior Brochure

Sponsors
Below is a list of current projects in the HFA lab. To view a list of past or completed projects, please visit our archived projects page.

**Healthcare**

**Identifying Strategies to Keep Older Adults Healthy in Senior Living Communities**

Contact Person: **Sara McBride**

Many older adults choose to make the transition into senior living communities, such as independent living or assisted living. We are interested in understanding the types of strategies used and decisions made by staff in these types of communities that are aimed at supporting residents' health. By identifying these processes, we may be able to improve training or design decision support systems that could facilitate portions of the decision making process.
Product Testing Network: Georgia Tech Launches HomeLab to Help Companies Evaluate In-Home Use of Emerging Health Technologies

Baby boomers have witnessed many technological innovations, and they expect technology to provide them with solutions to help maintain their independence for as long as possible. They are outfitting their homes with products to help them live healthy lifestyles, manage chronic conditions, remember to take medications and remain connected with their caregivers.

To help companies evaluate baby boomers’ perceptions, use and acceptance of home health and wellness technologies, the Georgia Institute of Technology has launched HomeLab. HomeLab is a statewide network of adults 50 years of age and older recruited to evaluate the in-home usability and effectiveness of consumer products designed for the aging adult population.

HomeLab currently consists of 100 homes distributed throughout the state of Georgia; the network is expected to grow to 150 homes later this year and 550 homes by 2014.
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.
Products and Services

VGo is an all-in-one solution that includes everything you need to establish your physical presence in a distant location.

With the VGo solution, an individual's presence is replicated in a distant location such that they can interact and perform their job in ways not previously possible. Now they can see, be seen, hear, be heard and move around in any remote facility – just as if they were there. VGo will enable businesses to increase productivity of remote and travelling employees, healthcare providers to deliver lower cost services and improved quality of care, and homebound students to attend school – all with a great user experience and at an affordable price.

What is VGo?

How does it work?

How does it compare?
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
Introducing Beam
The premier remote presence solution.

Get Beam
“Exploring New Ideas with Advanced Social Robotics”
— an extension of humankind. RoboKind.
Meet NAO!
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.
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.
Electronic Sensors Printed Directly on the Skin

New electronic tattoos could help monitor health during normal daily activities.

By Mike Orcutt on March 15, 2013

Taking advantage of recent advances in flexible electronics, researchers have devised a way to "print" devices directly onto the skin so people can wear them for an extended period while performing normal daily activities. Such systems could be used to track health and monitor healing near the skin's surface, as in the case of surgical wounds.

So-called "epidermal electronics" were demonstrated previously in research from the lab of John Rogers, a materials scientist at the University of Illinois at Urbana-Champaign; the devices consist of ultrathin electrodes, electronics, sensors, and wireless power and communication systems. In theory, they could attach to the skin and record and transmit electrophysiological measurements for medical purposes. These early versions of the technology, which were designed to be applied to a thin, soft elastomer backing, were "fine for an office environment," says Rogers, "but if you wanted to go swimming or take a shower they weren't able to hold up." Now, Rogers and his coworkers have figured out how to print the electronics right on the skin, making the device more durable and rugged.

"What we've found is that you don't even need the elastomer backing," Rogers says. "You can use a rubber stamp to just deliver the ultrathin mesh electronics directly to the surface of the skin." The researchers also found that they could use commercially available "spray-on bandage" products to add a thin protective layer and bond the system to the skin in a "very robust way," he says.

Eliminating the elastomer backing makes the device one-thirtieth as thick, and thus "more conformal to the kind of roughness that's present naturally on the surface of the skin," says Rogers. It can be worn for up to two weeks before the skin's natural exfoliation process causes it to take off.

During the two weeks that it's attached, the device can measure things like temperature, strain, and the hydration state of the skin, all of which are useful in tracking general health and wellness. One specific application could be to monitor wound healing: If a doctor or nurse attached the system near a surgical wound before the patient left the hospital, it could take measurements and transmit the information wirelessly to the healthcare providers.
Products / New Products

ASL brings innovative products to our clients! We are here to help each client reach their full potential – our team creates products and designs as a direct result of the needs of those we serve. Our goal has always been independence and equal rights for those we work with...
Google announces Calico, a new company focused on health and well-being

MOUNTAIN VIEW, CA – September 18, 2013 – Google today announced Calico, a new company that will focus on health and well-being, in particular the challenge of aging and associated diseases. Arthur D. Levinson, Chairman and former CEO of Genentech and Chairman of Apple, will be Chief Executive Officer and a founding investor.

Announcing this new investment, Larry Page, Google CEO said: “Illness and aging affect all our families. With some longer term, science-thinking around healthcare and biotechnology, I believe we can improve millions of lives. It’s impossible to imagine anyone better than Art—one of the leading scientists, entrepreneurs and CEOs of our generation—to take this new venture forward.” Art said: “I’ve dedicated much of my life to science and technology, with the goal of improving human health. Larry’s focus on outsized improvements has always inspired me, and I’m tremendously excited about what’s next.”

Art Levinson will remain Chairman of Genentech and a director of Hoffmann-La Roche, as well as Chairman of Apple.

Commenting on Art’s new role, Franz Humer, Chairman of Hoffmann-La Roche, said: “Art’s track record at Genentech has been exceptional, and we see an interesting potential for our companies to work together going forward. We’re delighted he’ll stay on our board.”

Tim Cook, Chief Executive Officer of Apple, said: “For too many of our friends and family, life has been cut short or the quality of their lives too often lacking. Art is one of the crazy ones who thinks it doesn’t have to be this way. There is no one better suited to lead this mission, and I am excited to see the results.”

Contact

Leslie Miller
Google Corporate Communications
Ten days with Google Glass

By Will Shanklin

December 23, 2013

Gizmag shares some more thoughts about being part of the Google Glass Explorer program

Image Gallery (7 images)

Here at Gizmag, we’re very interested in the present and future of wearable tech. So we thought it was fitting to sign up for the Google Glass Explorer program, to give you a better idea of what Sergey Brin and company are cooking up in Mountain View. Though we aren’t quite ready to do a proper Google Glass review, we want to share some more thoughts from our first ten days with Glass.

My first few days with Google Glass were mostly about the self-
Captioning

• Hearing related disabilities & Cognitive processing
  • Captioning – TV, Movies, etc.
  • Live remote captioning for events
    • CART – Word for word
    • C-Print – complete thoughts

• Video captioning – Low Vision/Blind
Claro Read is one example

- For PC or Mac
- Reads aloud any print that is highlighted
- Floating toolbar
- Quickly and easily change the font size
- Change colors and spacing
- Check definition and meaning of words
- Additional voices available for PC

ClaroRead for PC Overview
Claro Read add-ons

ClaroView
• Adjust screen color and tint

ClaroCapture
• Organize notes from various files

ClaroIdeas
• Visual graphic organizer

Screen ruler
• Highlights and magnifies screen in a horizontal band
Premier Software

• [www.readingmadeeZ.com](http://www.readingmadeeZ.com)
• Read documents in PDF, Microsoft Word, HTML, Rich Text, text file format
• Convert to audio files for use on a CD or MP3 player
• Scan and read documents
• Look up a word or definition in the integrated dictionary
• Create study notes and much more
Premier Features

• PDF Equalizer (example on next slide)
• E-Text Reader
• Universal Reader Plus
• Scan and Read Pro
• Talking Word Processor
• PDF Magic Pro
• Text-to-Audio
• Ultimate Talking Dictionary
• Talking Calculator
• Premier Predictor Pro
never again meet; Walton meets and loves Frankenstein, the Creature is reunited with Frankenstein, as a corpse; the Creature in the last scene meets Walton, and a message, of understanding if not love, passes between them. The plot of the last volume has taken a decisive turn in the direction of failure to breed, or to breed healthily.

When it comes to parenting, Frankenstein is himself a monster. He will not acknowledge his only child, the Being he chooses to call Monster, Fiend, and Demon, though no human father ever played so thorough-going a role in any birth. (The good reasons for the critic to avoid Frankenstein's harshest most unpaternal acts of naming should be apparent.) Frankenstein repeatedly illustrates, but ironically, Lawrence's scholarly observations about parenting—the medical mishaps to which the birth-process is subject; the one sure
Android & Apple
Microsoft Surface

• Windows 8
• Slim and has a USB port
• Moveable Tiles
• Built-in Accessibility
  – Speech-to-text
  – Narrator
• Thin pressure sensitive cover that doubles as a keyboard
• Starts at $499
Samsung Galaxy

- Download Accessibility Features
- 7 inch or 10 inch screen available
- Compatible with flash/ WIFI
- 8.0 coming out February 2013 in Europe
- 8.0 will have a better camera and use a SIM card for storage
- Starts at $199.99 but 8.0 may be more
Apple iPad mini

- Multi-touch screen
- New iOS 6
- Millions of apps
- Surf web
- iTunes
- Videos
- Organization
- Accessibility
- Books
- Photos
- Speakers
- 5.0 megapixel camera
- Starts at $329

Height: 7.87 in
Width: 5.3 in
Depth: 0.28 in
Weight: 0.68 lb
LET’S EXPLORE OUR FAVORITE APPS!
Apps for Daily Living
MyMedSchedule

- Keep track of medication
- Reminders
- Refill Reminders
- Healthcare Provider Profiles
- Insurance Information
- Allergies
- Works across Platforms
- Free
- www.mymedschedule.com
Apps for Shopping
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
Key Ring

- One Place to store all reward cards
- Organized
- Android & Apple version
- [www.keyringapp.com](http://www.keyringapp.com)
- Free!
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
Apps for Current Events
USA Today

- Current Events in order
- Breaking News Alerts
- Videos
- Photos and Text
- Pick Favorite Interests
- Free
SkyGrid

- Personalize news events by categories
- Simple interface
- Free
- www.skygrid.com
Apps for Social Networking/Staying Connected
Facebook

- Connect with friends
- Create photo albums to share
- Create Events
- Instant Messaging
- Group Messaging
- Free
Instagram

• Free
• Share videos and photos with friends and followers
• Send posts directly to friends
Tango

• Make video and phone calls across mobile platforms
• Group chats
• Works on tablets & PCs
• http://www.tango.me
• Free
iMovie

- Share information via Facebook, Twitter, Email, or SMS
- Upload photos
Apps for Fitness
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
EveryTrail

• Tracks route using your iPhone GPS
• Use with walking tours, biking, running, hiking, sailing and driving
• Travel map is visible and drawn while trip is in progress
• Plot camera photos and video on map instantly
• View stats (distance, speed, elevation and more) while tracking
• View topography and terrain maps on iPhone
• Download maps for offline viewing
• Free
Apps for Nutrition
Fooducate

- Track calories
- Provides healthier options
- Educates on food ingredients
- Save favorites
- Create lists
- App for allergies and gluten-free
- App for diabetes nutrition
- Free
- www.fooducate.com
Happy Cow

- Interactive map to locate vegan, vegetarian and health food stores
- Provides directions, phone numbers, & website
- Share information via Facebook, Twitter, Email, or SMS
- Upload photos
- $2.99
Apps for Organizing
Genius Scan

- Scan documents or handwritten notes
- Email the scans as JPEG or PDF
- Free
- Genius Scan Plus ($2.99) allows upload to Dropbox, Skydrive or Evernote
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!
Apps for Writing
Dragon Dictation

- Voice Recognition
- Free
- Dictate notes, emails, Twitter, and Facebook
- Supports many languages
- Cut, Copy, Paste
- Android
  - Dragon Go!
  - Dragon Hands Free Assistant
AudioNote

- Records your notes, meetings or lectures
- Can take notes by typing, stylus, or drawing
- Time stamps so you can go directly to where you want to hear
- Highlights notes when read back
- $4.99
ThumbPad

- Type with your thumbs on the iPad as you do on the iPhone
- Adjustable keyboard
- Customizable
  - Adjust key width
  - Height
  - Spacing
- $3.99
Idea Sketch

- Mind and concept mapping
- Create flow charts
- Brainstorm ideas
- Convert flowchart to text outline and vice versa
- Free
Apps for Reading
Types of Reading Apps

- There are over 27,000 reading apps and over 500,000 books and publications
- Active Reading Apps
  - Studies show that comprehension improves by 38%-70%
  - Defined as eyes are on the screen following the words
  - Highlighting of words, sentences, and paragraphs
- Passive Reading App
  - No pictures
  - Usually synthetic Computer Generated Voices/ VoiceOver
    - Therese Willkomm
ClaroSpeak US

- Text-to-Speech
  - import documents and PDFs into ClaroSpeak from apps such as Mail, or import PDF, Word, Pages and other files directly from Dropbox using

- Change font and color
- Save text as an audio file
- Visual Tracking
- Send Text
Reading Apps

• Learning Ally  
  – DAISY  
  – Membership required  
  – over 75,000 audiobooks, audio textbooks, and other recorded books

• Audible.com  
  – Over 100,000 titles  
  – Works on both Android and Apple  
  – $7.00-$22.00 per month
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
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
WebReader

- Text to speech technology for reading web page content
- Web pages can be read as soon as they are loaded or use Cut, Copy, & Paste to read only sections of webpage
- Highlights as it reads text
- Speaking rate control available
- $1.99
Apps for Organization/Memory
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
Cozi

• Free
• You can access from a computer, smartphone or tablet
• Manage a family calendar and set reminders.
  – Add an appointment and it uploads to your Cozi account so everyone can see it.
• Get your grocery shopping lists when you're at the store, even when offline.
• Add a to do list item right when you think of it and have it right there in your pocket to remind yourself.
• Jot down a memory as it happens in the journal.
  – Add a photo from your library to capture the moment.
• Add and edit non-repeating calendar appointments, shopping lists, and to do lists while offline.
Apps for Writing and Reading
Say it & Mail it Pro

- Email voice memos
- Attach pictures
- Set preference to start recording as soon as app opens
- Add location
Brevity

- Word Completion App
- Automatically add words if not in list
- Remembers how often you use words and offers the most frequently chosen options to you first
- E-mail Support - Send e-mails from directly within the application
- Text Message Support
- Remove misspelled or unwanted words
- Set prediction font size and window transparency
iWriteRead

- TextHelp
- No internet needed to use
- Text-to-speech
- Word Prediction
- Phonetic Spell Checker
- Homophone and Confusables Checker
- Dictionary
- Picture Dictionary
- Customizable Background and Text Colors
- Choice of Voices and Fonts
- Importing and Sharing documents
Apps for Communication
**Locabulary**

- Uses GPS to track user location and suggests appropriate vocabulary based on location – *ie: McDonald’s starbucks*
- A keyboard to type for text-to-speech
- User can tag their own locations and create vocabulary for each location
- Lite version Free; Pro version $130
• 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
TouchChat

- Designed for individuals with Autism, Down Syndrome, ALS, apraxia, stroke, or other conditions that affect a person's ability to use natural speech
- Able to import your own pictures or take pictures
- Works on Apple and Android systems
- Over 10,000 symbols included
- Create videos
- $149
Apps for Sensory/Hearing
EyeNote

- Uses built in camera to scan dollar bills
- Speaks out loud
  - Distinguished btw front and back of bill
- Free
- Supports English and Spanish
- Privacy mode
  - Pulses or beeps
BrailleTouch

- Prototype app for touchscreen mobile devices
- FREE Open Source app
- 32 words per minute with 92% accuracy with the prototype app for the iPhone
- Use of the six-key configuration so that the keyboard fits on the screen and users keep their fingers in a relatively fixed position while texting
- GA Tech Researchers

- Type with screen facing away
- Braille like typing
HearPlanet (Lite): Audio Guide to the World

• Speaks aloud what is around out you
• Learn about monuments. Historic sites, etc.
• FREE
• Upgrade to a paid version
ZoomReader

- OCR app
- Ai Squared
- Read back in a natural voice
- Customizable highlight colors, synthesizer, text size and speech rate
- Low vision users

- $19.99
- ZoomReader
Apps for Emergency
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
Medimate

- Medical prescription organizer
  - Both you and family
- Customize your medicine catalog
- Understand your usage
American Red Cross: Shelter View

- Know when and where shelters have been opened to provide assistance.
- Maps locations and shelter details
- View shelter details
- Capacity of the shelter and current population
- Shelter address and location.
- Shelter information is updated every 30 minutes
- Free
Emergency Aid

- What To Do in a personal threat, disaster or emergency
- Detailed medical profile
- Emergency contacts and health information with photo and customizable notes
- Distress Signal and light
- Illustrated instructions with highlighted “What to do”, “Warnings” and “Do Not”
- One-Tap Call to emergency aid services or web sites
- $1.99
Apps for Navigation
Favorite Travel Apps

- Expedia
  - Check-in/Electronic Ticket
  - Change Seats
  - Check Flight status
  - Buy Tickets
  - Sends updates
  - Voice Over
Favorite Navigation Apps

- Around Me
  - Identifies where you are
  - Lists what is around you
  - View route to place from where you are
  - Add information to contact list

- Talk and Drive Waze
  - Operate your map applications simply by talking
  - Launch the application, say your destination
Apps for Relaxation
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
Pandora

- Free internet radio
- Create custom stations based on genre
- Free
Talk with Us!

What are Your Favorite Apps for Living, Writing, Reading Organization/ Memory?
Talk with Us!

What Technology Trends do see?
Our Question to You:
What have You Learned today?
Thank You!
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