Healthy Living with Assistive Technology

Rachel Wilson

With contributions from the Tools for Life Team and Network

Tools for Life
AMAC Accessibility Solutions and Research Center
College of Architecture | Georgia Institute of Technology

www.gatfl.gatech.edu

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.

Presenters will share information on Tools for Life, Georgia's Assistive Technology Act Program and how to access services. Other topics will explore 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.

- For more information, please visit our website at www.amacusg.org

Tools for Life Mission

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 & 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.gatech.edu

The TFL Network is Growing!

Georgia Tech | Tools for LIFE
Georgia's Assistive Technology Act Program

Search our Site   Go

TRAINING

FUNDING

PUBLICATIONS

TFL WIKI

MEET THE TFL TEAM

MEET THE ADVISORY COUNCIL

DIRECTIONS/MAP

JOIN OUR MAILING LIST

SCHEDULE A TOUR

Welcome   AT Services   Try AT   Get AT   AT Guides   Research

Try Before You Buy

GATE 2016

DEC 9   Georgia Tech Student Center

GATE 2016 EXHIBITORS

DEC 9   Georgia Tech Student Center

WEBINARS

OCT 6   Apps for Communication

○ Current Webinar Schedule
○ Webinar Archives

TOOLS FOR LIFE APPFINDER

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

AT ONLINE EXCHANGE

gTRADE

AT FUNDING GUIDE

DOLLARS & SENSE
NAVIGATING THE AT FUNDING STREAM

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

TFL AT Demo Lab

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

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	Mid-Tech	High-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	• 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	• 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

AMAC
Accessibility for All

Georgia's Assistive
Technology Act Program

Why Assistive Technology?

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

- For a person with a disability, technology makes life possible.

- **TIP: USE AT! We have yet to meet a successful individual who does not use any AT.**

AMAC
Accessibility for All

T⚙OLS
for
LIFE
Georgia's Assistive
Technology Act Program

Normal Effects of Aging

- Hearing
- Vision
- Neuro-sensory system
- Skeleto-muscular
- Intellectual functioning
- Social supports

- Influenced by genetics, lifestyle and environment

Hearing

- Natural deterioration
- Tinnitus
- Conversation, socialization, and communication impacted
- Ability may vary place to place
- Hearing aids often problematic

- Changes in
  - Strength
  - Balance
  - Endurance
  - Range of motion
  - Sensitivity to temperature changes
  - Sensitivity to pain and trauma

Intellectual Functioning

- Processing may take longer

- Long-term memory often better than short-term memory

- Motivation varies to learn and do things differently

Staying off the FAST Track!

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

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.

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

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

Assistive Technology Funding Solutions

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

Friends of Disabled Adults and Children - FODAC

- **With a strong network of volunteers and partners, FODAC provides refurbished equipment and services improve their overall quality of life.**

- **Refurbished items can be cost effective**

- **FODAC is a partnering agency and have programs for:**
  - **Durable Medical Equipment**
  - **Home Mods**
  - **ReMount**
  - **Disposable Medical Equipment**

- **www.fodac.org**

Dollars and Sense

- **Your online funding guide**

- **Create and add resources**

- **Local, statewide and national**

- **http://gatfl.gatech.edu//ds**

What is Credit-Able?

- **Alternative Financing Program for Georgia**

- **Low interest, small loans**
  - **$250-$5,000**
  - **Interest rate of 5-9%**

- **Used for:**
  - **Equipment**
  - **Software**
  - **Home mods**
  - **Vehicle mods**

Why Credit-Able?

- **Flexibility**

- **Personal**

- **More accessible**

- **Build/re-build credit**

- **You save money**

Eligibility Criteria

Be a resident of Georgia

AND

| A person with a disability | **or** | A **family member/guardian** of a person with a disability | **or** | An **employer** of a person with a disability |

AND

| Be able to pay back the loan | **&** | Using the loan for AT |

Exploring Assistive Technology Solutions

AT for Hearing

Pocket Talker

- Sound amplifier

- Decreases background noise

- Works for individuals with ADHD

TV SoundBox Speaker Receiver
- No more straining to hear your TV from far away
- Volume control works independently from your TV speaker
- Wireless and lightweight

AT for Vision

Illuminating Magnifier

- 5x LED Lighted

- Compact

Magnifier Sheet

- Hands-Free

- 3x Magnification

20/20 Vision Panoramic

- Rearview Mirror

AT for Self Feeding

Non-Slip Placemat

- Keep plates/ items from moving
- Use on Roller walkers
- Cut to fit

Freedom Dinnerware

- Low vision, Alzheimer's, Arthritis, Stroke
- Suction keeps from moving
- Helps with getting food on utensils

AT in the Kitchen

- Adapted Cutting Board
  - One-Handed
  - Low-Vision

- The KFS Easy Eat Fork
  - Lightweight utensil
  - Rocker knife
  - One-handed or limited grip

- Rocker Knife
  - One handed cutting

Health and Safety

- **EpicID Emergency ID Band**
  - Easy for first responders to access
  - Salt water safe USB with a durable stainless steel clasp and USB cover
  - No subscription or internet connection is required
  - Plug this USB into your computer and input or update your personal information medical history and insurance information
  - Both PC and Mac compatible

- **Health Smart Thermometer**
  - Compact and easy to hold
  - Talking thermometer
    Large, backlit LCD screen with LED fever alarm indicator
    30-reading memory storage
  - Date and time display
    Fahrenheit/Celsius switchable

Memory

Reminder Rosie

- Alarm Clock
- Personal Voice Reminder
- Easy to use

MedCenter System

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

Dressing and Bathing

- Sock aid
- Elastic shoe laces
- Dressing stick
- Long shoe horn
- Long handle bath sponge

Personal Assistance

Freedom Wand

- Toileting
- Hygiene
- Grooming

Home Bed Assist Handle

- Slides under mattress
- Provides a safe, secure grip for getting in and out of bed

Mobility & Transportation

Silicone Seabolt Reach Extender Helper

- Makes Gripping and Pulling Seatbelt Easier

Deluxe Swivel Seat Cushion

- Convert stationary chairs into swiveling chairs to reduce the strain on your back and hips. The seat cushion swivels 360 degrees for smooth, easy movement in either direction.

- Great for home, office or travel use; easily get in and out of vehicles

- Portable and lightweight yet supports up to 300 pounds

- Non-skid, flexible swivel base contours to seat and stays in place.

Handy Bar

- Automotive standing aid

- Emergency escape tool - Window breaker

Recreation
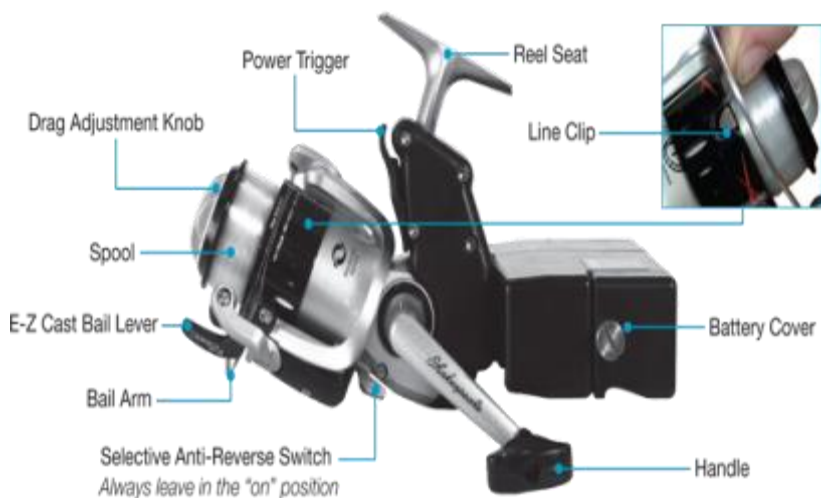
Computer Access

Zoom Text Keyboard
- Large Yellow Keys
- Easy to See
- USB Port

Heated Mouse
- Infrared Heat
- Carpal Tunnel/Arthritis
- Works well in colder weather

Trackball
- Improves control while reducing hand and wrist motion

Communication Tools

- Low Tech
  - Symbols
  - Comm boards, wallets, rings etc.
- Mid Tech
  - Single Message
  - Sequenced Messages
  - Static Display Devices
- High Tech
  - Dynamic Display
  - Icon Sequencing

Communication

- Go Talk 9+
  - is lightweight and rugged
  - 45 message capacity and five recording levels
  - three "core messages" which stay the same on each level so you don't need to re-record essential messages for each level

Emergency

Serene Innovations Kit

- The text and alerts you to public emergency broadcasting warnings of impending emergencies or disasters.
- Includes wearable unit, doorbell, home/cell phone ringer/flasher, and bed shaker.

Personal Pager

- Alert family/caregiver for assistance.
- Alert with time or vibration.
- Wireless transmitter up to 100 feet.

Safety Tape for Low Vision (Yellow)

- Easily and clearly marked hazardous areas to prevent injuries.
- $3.00

TOOLS for LIFE
Georgia's Assistive
Technology Act Program

VGo Telepresence Robot

- Enables a person to replicate themselves 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 opportunities.

Kubi

- Telepresence
- Uses a tablet
- Uses free conference sites
  - Google Hangout
  - FaceTime
  - Skype

Magnifiers

- Lots of different types
- Handheld
- Some with a LED Light
- Full Page

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/

iBeacon Technology

- Estimote Beacons
  - Wireless sensors that attached to any location or object
  - Broadcasts radio signals to smartphone
  - https://www.youtube.com/watch?v=lwnmx-5mBLM

Lechal

- Haptic Footwear
- Uses GPS to let you know
- Connects with app
- www.lechal.com

Assistive Listening Devices

- Audio/Hearing Loop

- Infrared System

- FM System

- Wearable device

Visual Alerts

- Visual doorbells

- Flash on your cellphone

- Smoke/carbon monoxide

- Flashing computer screen

Physical Alerts

- Haptic alerts on phone and wearables

- Vibrating alerts

- Bed shaker

Watchminder

- Rechargeable battery
- 65 pre-programmed messages to (
- 30 daily recurring alarms
- Create your own personalized mes
- Helpful training and reminder mod
- Vibrating alert

GPS Tracking Devices

- Find My iPhone
- Find My Friends

10 Tracking Devices that Keep Loved Ones with Dementia Safe

Wandering adds more confusion to the lives of those already dealing with a disorienting disease, and leads many people with Alzheimer's or dementia into unsafe situations. Location and elderly GPS tracking devices for dementia are an increasing option for families and caregivers trying to reduce wandering.

Here are 10 location devices that are being used to keep loved ones with the disease safe:

1. iTraq

A new cellular tracking device that came out this year, iTraq is the "world's first global location device that can found anywhere." It uses cellular towers to determine location, allowing it to be used anywhere there is service around the world. The device itself is as small as a credit card, and its location is reported to you through a mobile application which allows you to view a map of locations and timestamps. iTraq also features a "Guard Mode" where users can specify a radius on a map, then receive alerts if/when the iTraq goes beyond your pre set radius. This means that you could receive notification if a loved one wandered from home, and also be able to track where they are with accuracy.

2. Project Lifesaver

Fulfilling their mission to "provide a timely response to save lives and reduce potential injury for adults and children who wander due to Alzheimer's, autism and other related condition or disorders," Project Lifesaver's GPS tracking program has helped rescue 2,983 people. We spoke with Gene Saunders, Chief Executive Off and Founder of Project Lifesaver, who shares more about the technology – a small PAL (Protect and Locate) tracker worn around the wrist – that has saved so many from wandering. "Citizens enrolled in Project Lifesave wear a small personal transmitter around the wrist or ankle that emits an individualized tracking signal. If an enrolled client goes missing, the caregiver notifies their local Project Lifesaver agency, and a trained emerger team responds to the wanderer's area. Most who wander are found within a few miles from home, and search times have been reduced from hours and days to minutes. Recovery times for PLI clients average 30 minutes 95% less time than standard operations." Saunders adds: "Recently, Project Lifesaver has added a new technology… that can also provide a radio frequency safe zone around them that notifies the caregiver in the event an at risk individual breaches this established safe zone."

3. Mindme

Mindme offers assistance to families dealing with dementia and wandering in the form of both an alarm and

B-Calm

- "acoustic shield", allowing the individual to have control of the sound environment

- helps reduce off task behaviors and irritabil

- disturbing noises are blocked and replaced soothing sounds

Snug Vest

- inflates to provide adjustable and evenly-distributed pressure to the torso for a comforting hug-like squeeze without pressure placed on the stomach or chest.

- promotes independence as the user ca[...] way to get the exact amount of safe pr[...] enables the user to complete daily task[...]

snug vest™

Simple Safety Solutions

- Anywhere lighting: "Stick-n-click" or motion detection lighting can illuminate darken hallways or dark staircases

- Skid-resistant rugs

- Smoke alarms for deaf/hard of hearing

- Organize cords by using toilet paper rolls. Cost efficient!

organize YOUR cords

AT for ADL

- **Non-Slip Placemat**
  - Keep plates and other items from moving
  - Use on roller walkers
  - Cut to fit

- **Freedom wand**
  - toilet aid

- **Freedom Dinnerware**
  - Low vision, Alzheimer's, Arthritis, stroke
  - Suction keeps plate from moving
  - Helps with getting food on utensils

Does this look familiar?

- How many prescriptions?
- How are they managed?

Medication Solutions

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

Pillpac.com
- Organized pills packaged by pharmacy
- Sealed pouches for each day
- Time stamped
- Lessen medication errors

www.alzstore.com
- Holds 29 doses
- Set up to 4 alarms each day

Telephone Options

Future Call

- Amplified Picture Memory Phone
- Amplified Volume - Up To 40dB
- Hearing Aid Compatible
- One-Touch Emergency Button
- Easy-To-See Oversized Photo Buttons
- Bright Visual Ringer

Clarity Picture Phone

- Amplified Picture Memory Phone
- Amplified Volume - Up To 18dB
- Hearing Aid Compatible
- Easy-To-See Oversized Keypad Buttons
- 9 Programmable Photo-Dial Memory Buttons
- Bright Visual Ringer

Amazon Echo

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

Philips Hue Light Bulbs

- Wifi Connected
- Dimmable
- Displays Over 16 Million Colors
- Compatible with Amazon Echo
- Color Starter Kit $174.99

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~~ $299

- Kinect ~ $100

Tecla Shield

- Wireless device that controls smartphones and tablets using your external switches or the driver controls of your power wheelchair

- The only switch interface that works with both iOS® and Android mobile devices.
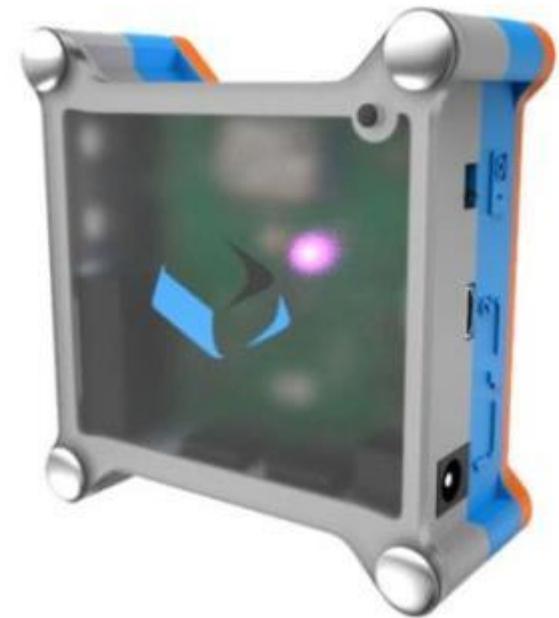
TFL Gaming Initiative

- 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

- There are many benefits to playing games
  - Improved Hand/Eye coordination
  - Increased problem solving and cognitive function
  - Better handle stressful environments
  - Social outlet

FRU

- FRU is a puzzle platformer that features an innovative use of Kinect, in which your silhouette becomes a "portal" between two worlds.

- Encourages physical movement, activity, and cognitive function.

- Can be played individually of cooperatively.

Boogie Dice

- First self rolling, sound activated, programmable dice.

- Activated using sound.
  - Clap, snap, thump

- Set roll duration, LED colors and more.

- Smartphone app can also be used to activate the dice.

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

Key Ring

- One Place to store all reward cards
- Organized
- Android & Apple www.keyringapp.com
- **Free!**
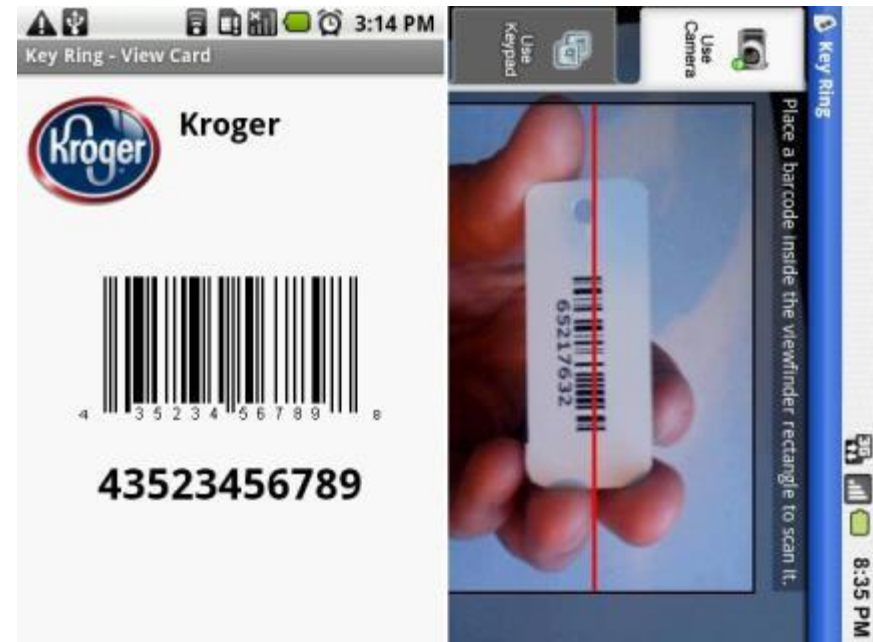
Fooducate

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

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
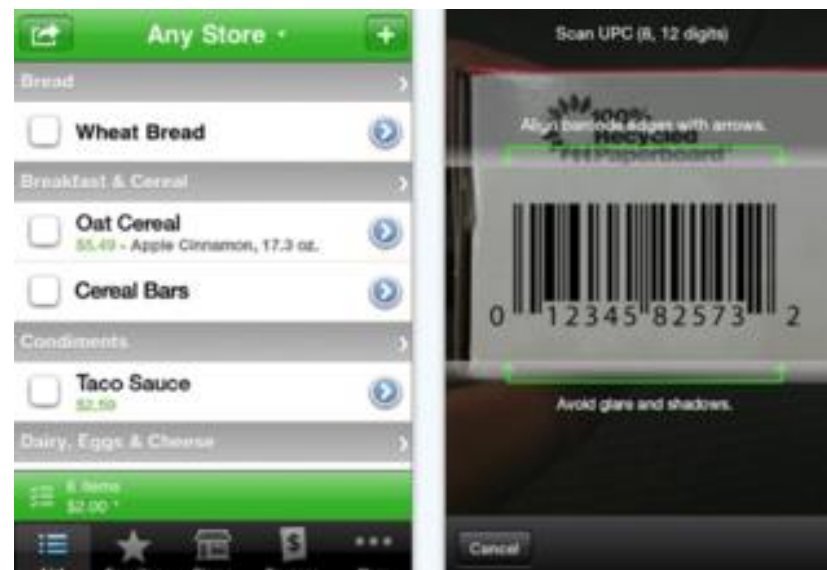
AudioNote
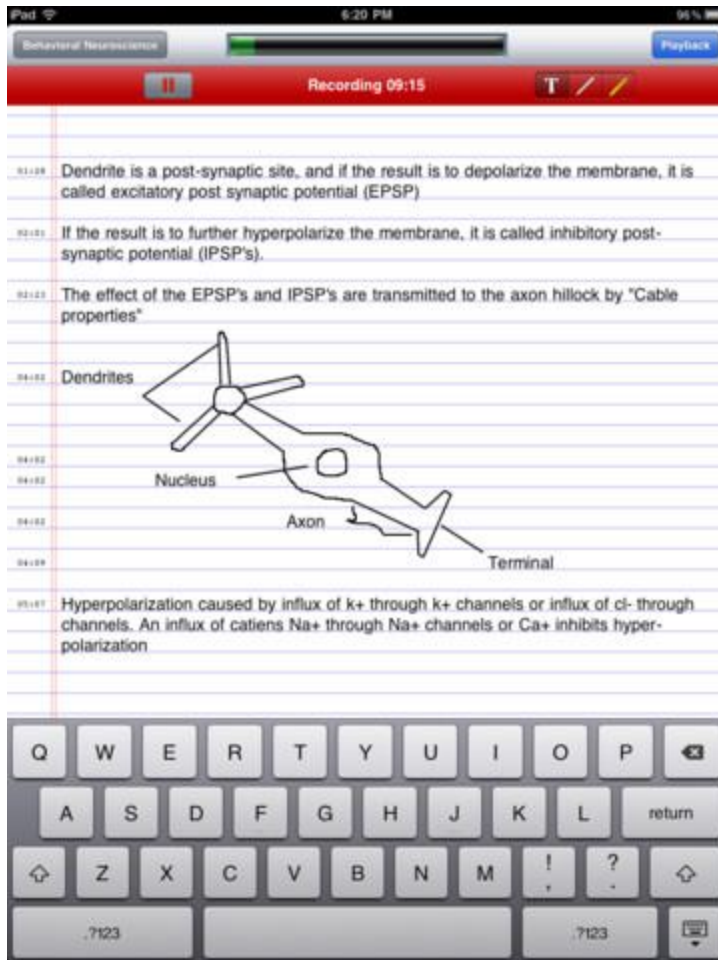
- Records your notes, meetings or lectures

- 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

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

BARD Mobile
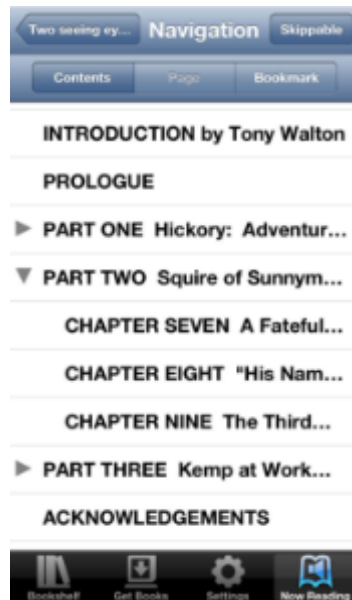
- Access directly to the National Library Service for the Blind and Physically Handicapped (NLS)
- Must be registered
- Settings
- Can use with braille display
- http://www.loc.gov/nls/find.html
- Free, iOS

MyMedSchedule

- Keep track of medication

- Reminders

- Refill Reminders

- Healthcare Provider Profiles

- Insurance Information

- Allergies

- Works across Platforms

- Free

- www.mymedschedule.com
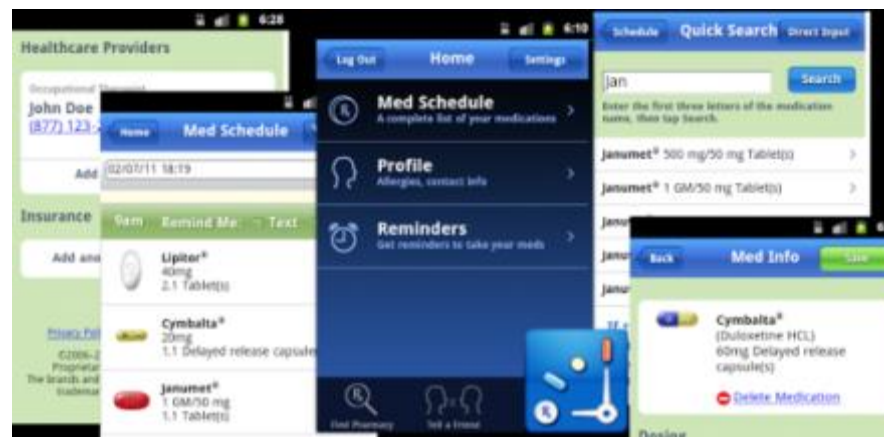
ICE - In Case of Emergency

- 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

Pacifica

- Monitor and track mood, anxiety and depression.

- Choose from several methods of relaxation.

- Connect with others for support in real time.

Apple iPhone Medical Id

- New
- Create Medical ID
- Can be used without passcode
- Medical Conditions
- Medications
- Emergency numbers
  - Can call
- Organ Donor
- Blood Type
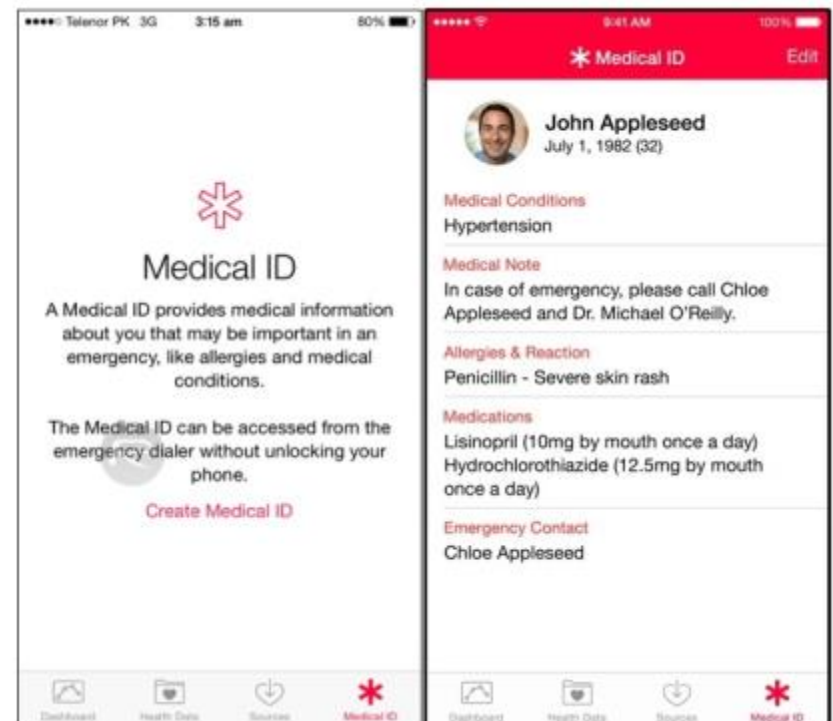
Calendars

COZI Family Organizer

- Family Calendar: Easy to use color-coded calendar, see individual schedules or the whole family at once
- Reminders: Set reminders for anyone in the family and get a weekly email of upcoming appointments
- Shopping and To Do Lists: Create as many lists as you want and access them anytime, anywhere
- Meals and Recipe Box: Easy to use dinner planner, plus store all your favorite recipes
- One Account for the Family: Everyone's schedules and lists in one place the whole family can access
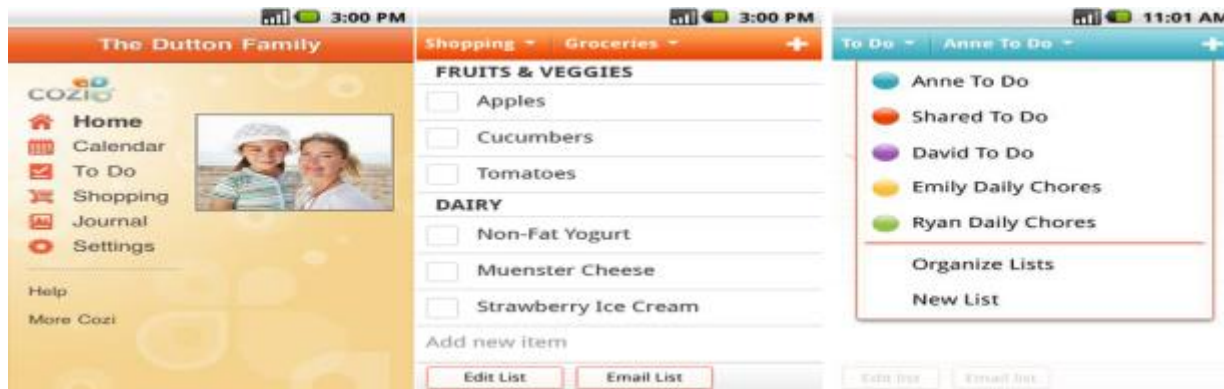
Apps for Mood/Emotion Management

- **Operation Reach Out (free iOS, Android)**
  - Developed by military to prevent suicide
    - Helps access thinking and when to reach out for help when in crisis
- **T2 Mood Tracker (free iOS, Android)**
  - Allows users to monitor moods on pre-loaded scales
- **MindShift (free iOS, Android)**
  - Tools for relaxation; develops new thinking; suggests healthy activities
- **Breathe2Relax (free iOS, Android)**
 - Uses guided breathing exercises to reduce anxiety

Anxiety Management

- Self-Help for Anxiety Management or SAM (free iOS, Android)
  - Tell the app how you're feeling, how anxious you are, or how worried you are.
  - Self-help features walk you through some calming or relaxation practices.
- iZen garden ($4.99, iOS)
- Koi Pond ($1.00, iOS)
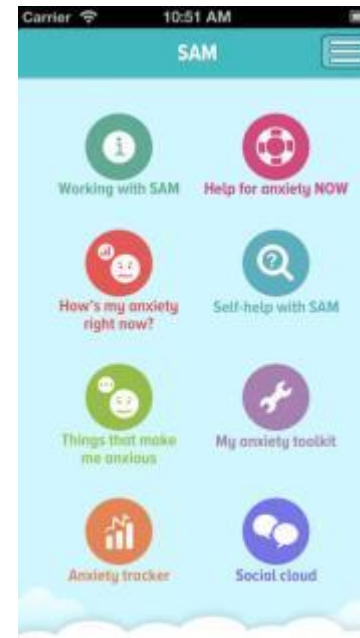
Task Management

- Evernote (free, iOS, Android, Windows)

  - allows you to store text, photos, and audio notes on your device of choice. Create "notebooks" and categorize notes for meetings and to-do lists. Notes are tagged with geo-location for mapping or search. Keep all info in one place

- 30/30 (free, iOS, Android, Windows)

  - Set up tasks and time needed to complete

  - App will tell you when to move onto next task
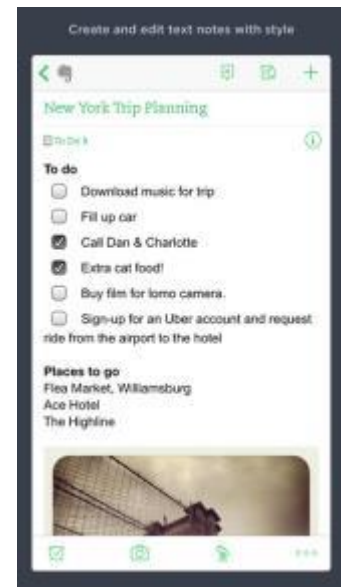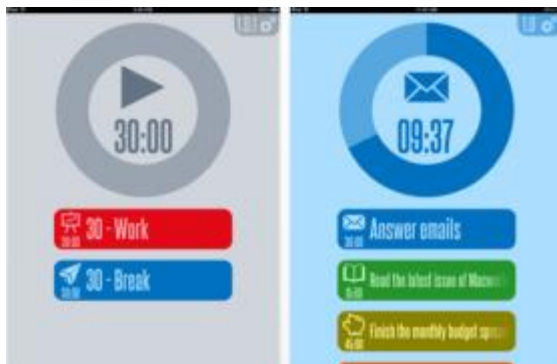
Apps for Sleep Management

- Sleep Time-Alarm Clock (free, iOS, Android)
- Sleep Cycle ($1, iOS, Android)
- Sleepbot (free, iOS, Android)

Monitors sleep habits

Uses accelerometer in the smartphone, tells you how quickly you fall to sleep, when you enter each phase of sleep, and how efficient each sleep cycle is. The app gently wakes you up at the right time, not in the middle of a deep sleep.

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

Questions

The Tools for Life Team

Carolyn Phillips
Director, Tools for Life
Carolyn.Phillips@gatfl.gatech.edu

Sarah Endicott
Research Scientist
sarah.endicott@design.gatech.edu

Danny Housley
AT Funding & Resource Specialist
Danny.Housley@gatfl.gatech.edu

Justin Ingham
Support Specialist
jingham3@gatech.edu

Ben Jacobs
Accommodations Specialist
Ben.Jacobs@gatfl.gatech.edu

Krista Mullen
Speech Language Pathologist
krista.mullen@gatfl.gatech.edu

Samantha Peters
Training Support Specialist
Samantha.Peters@gatfl.gatech.edu

Liz Persaud
Training and Outreach Coordinator
Liz.Persaud@gatfl.gatech.edu

Martha Rust
AT Specialist
Martha.Rust@gatfl.gatech.edu

Rachel Wilson
AT Specialist
Rachel.Wilson@gatfl.gatech.edu