Assistive Technology Solutions for Reading

Carolyn Phillips & Rachel Wilson, Tools for Life
With contributions from Martha Rust, Liz Persaud, Ben Jacobs & Ben Satterfield

www.gatfl.org

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

EASI Webinar Series 2015

www.amacusg.org

Description

Technology can help all students achieve academic success! This webinar is focused on assistive technology solutions for reading. Presenters will share some of the basic difficulties individuals with learning disabilities encounter when they are reading and then provide examples of how low, mid and high assistive tech devices are creating solutions. Discussion will focus on specific environments and how these devices are assisting people living with various learning disabilities in college. Strategies, solutions and resources that provide supports will be discussed.

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

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.

Accessibility Made Smart

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

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.

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Accessibility for All

Which One???

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LET'S TAKE A LOOK AT SOME OPTIONS & CONSIDER ACCESSIBILITY

TOOLS for LIFE
Georgia's Assistive Technology Act Program

Samsung Galaxy Tab 3

- Android System
- 7, 8, or 10 in screen
- Camera
- Micro card
- Wi-Fi
- USB for computer
- Some built-in accessibility app
  - Download others
- Starts at $199.99

Kindle Fire HD/HDX

- eBook Reader and mobile tablet
- Front facing camera
- Access to Amazon apps
- Free cloud storage for Amazon purchases
- Purchase Apps
- 7inch or 8.9 inch screen
- ‘Mayday’ button HDX
- Starts at $139- HD
- $199- HDX

Kindle Fire HD/HDX

- Download Books and Movies
- Access to Amazon
- Front Facing Camera
  - Skype
- Can Read Books out loud
  - If book has this feature enabled
  - Check on product details page
  - Whispersync for Voice
  - Immersion Reading
- Mayday Button
- Can Change:
  - Font
  - Line Spacing
  - Text Size
  - Background color

Layout of the Kindle Fire HD

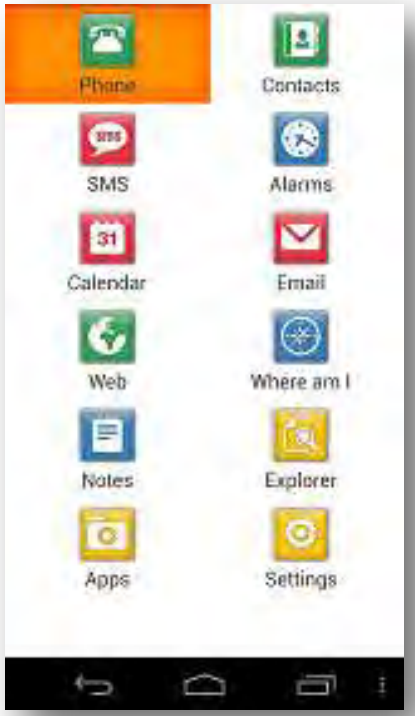
- External Speakers
- Power Button
- Charger
- Headphone Jack

Android Tablets

- Accessibility features are not built in
  - Talkback, Kickback, and Soundback
  - Gesture Feature in Jellybean
  - Eyes - free keyboard
  - IDEAL Web Reader for internet
  - No zoom or contrast right now
- What operation system is tablet running
  - Jellybean, Ice cream sandwich, Honeycomb, Gingerbread
- Google Play Store to buy apps
  - Must have Gmail address
  - Can use Amazon gift cards
- Not the best to use with someone who has low vision and/or blind or cognitive disabilities

Accessible Android Apps

- Big Launcher- icons look darker and text is larger
- Vlingo Virtual Assistant and iris. (alpha)- voice command apps
- Text to Speech Toy- Text-to- Speech
- Eyes-free keyboard
- IDEAL web reader
- Code Factory - Mobile Accessibility Suite for AT&T users
  - 12 different apps / 30 day free trial -$99
- www.androidaccess.net



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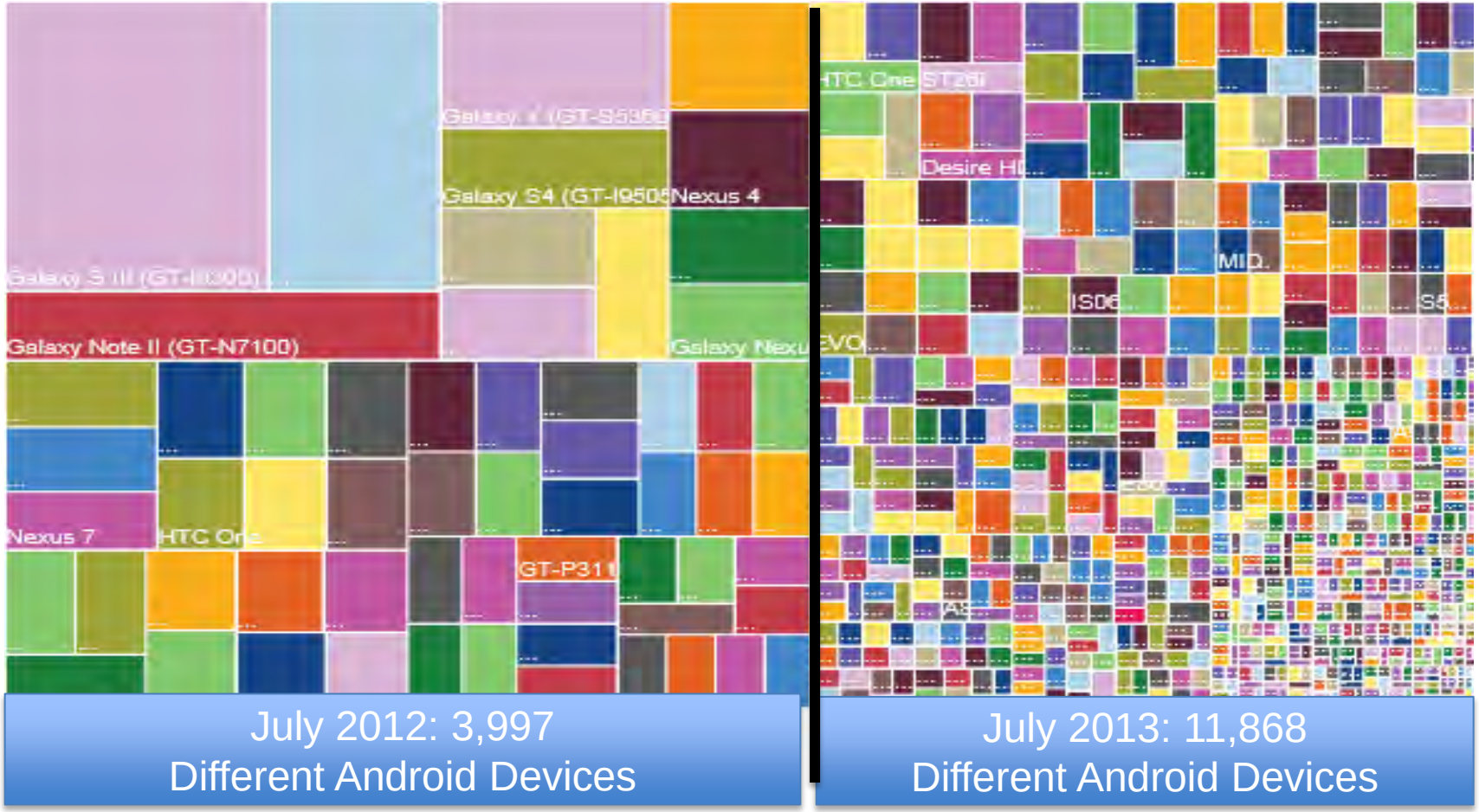
Android Device Fragmentation



July 2012: 3,997
Different Android Devices

July 2013: 11,868
Different Android Devices

July 30, 2013 http://www.ign.com/articles/2013/07/30/heres-what-android-fragmentation-looks-like
Ben Satterfield

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The Future of this OS is Limitless

- Google has the futuristic ambition and the funds to take Android to unprecedented heights. In many areas — such as predicting what users will do next.
- Google Now knows that in the morning you're getting ready for work and will tell you about the traffic.

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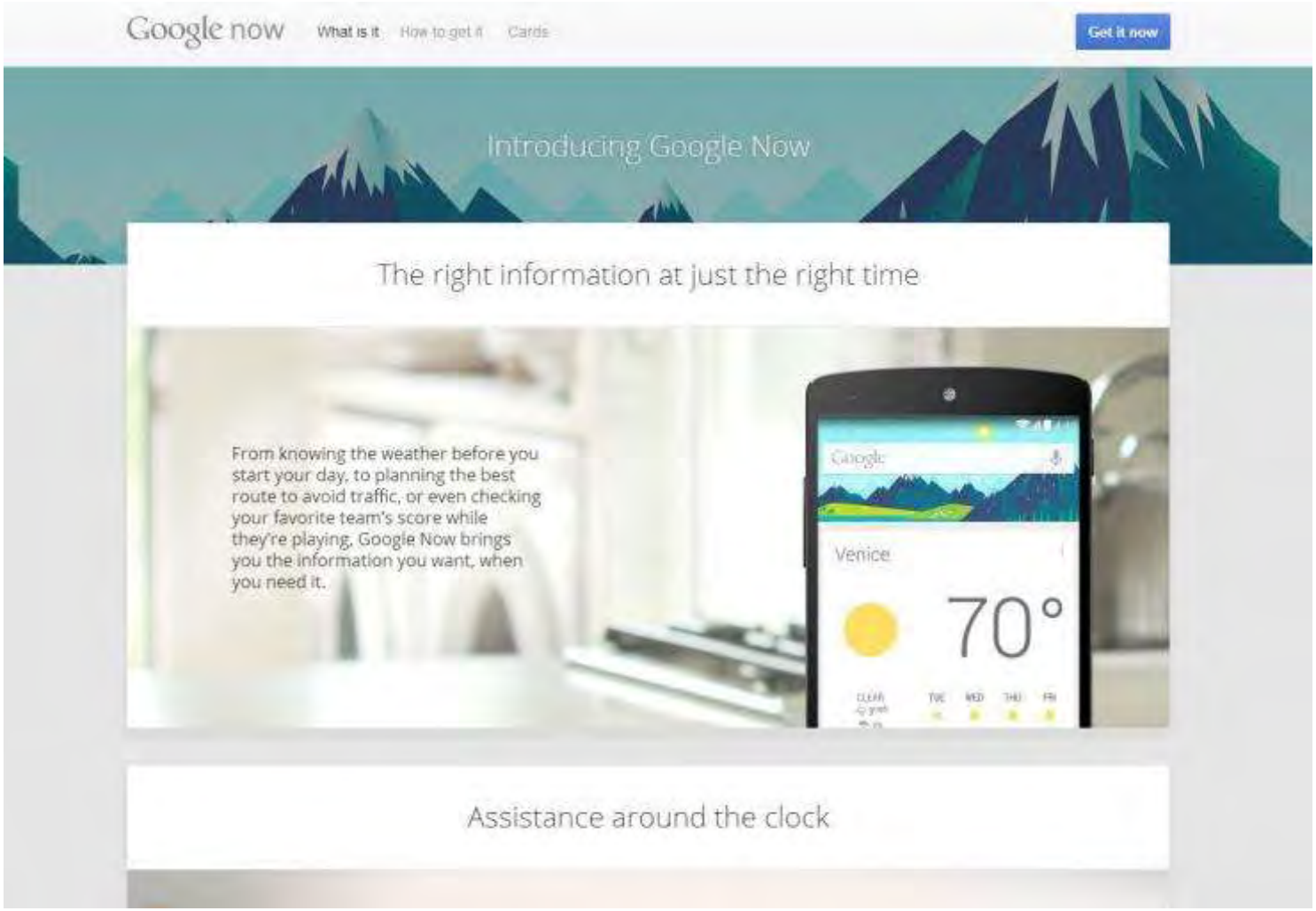
Google Now



Technology Changes Fast

- June 2007- 1st iPhone
- Sept 2007- 1st generation iPod Touch
- October 2008- 1st Android phone sold
- April 2010- 1ST iPad
- 2010- Google launched its Nexus series of tablets and smartphones
- 50 billion downloads!

Statistics

- There are approximately 73 million iPhones in the world.

  » *Apple, 2012*

- In 2010, Apple reported that over 1000 new apps are submitted every day.
- In 2012, 400 million iTunes accounts

  » *Y. Lachelle, Aug., 2010 and H. Dediu, June 2012*

- Apple receives about 49.5 Million App downloads per day!

  » *H. Dediu June 2012*

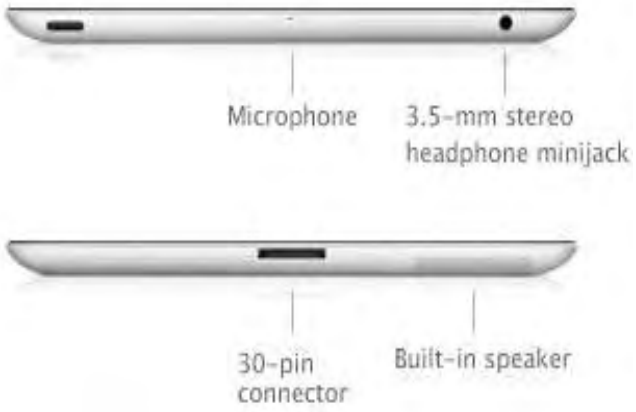
Apple iPad/ mini iPad

- Multi- touch screen
- New iOS 7
- Millions of apps
- Surf web
- iTunes
- Videos
- Organization
- Accessibility
- Books
- Photos
- Speakers
- New iPad had 5.0 megapixel camera
- Starts at $499/$399 and mini $329

Apple iPod Touch

- 5 Megapixel Camera
- Millions of apps
- Videos
- Surf Web
- Voice Over
- Organization
- Speakers
- Bluetooth
- New iOS 7
- Starts at $299 / $199 4th gen

Layout of the iPad

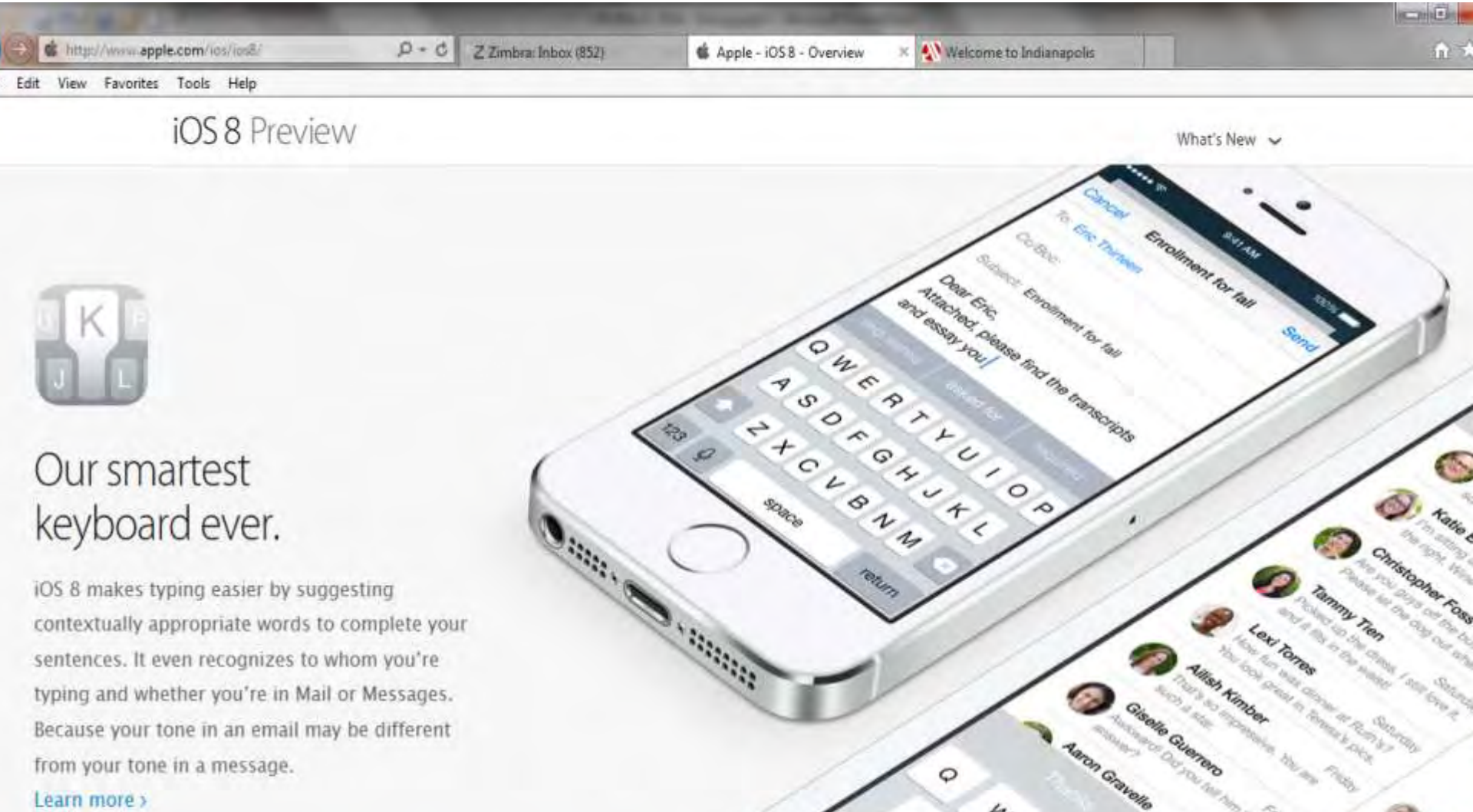


Built-in Accessibility Features

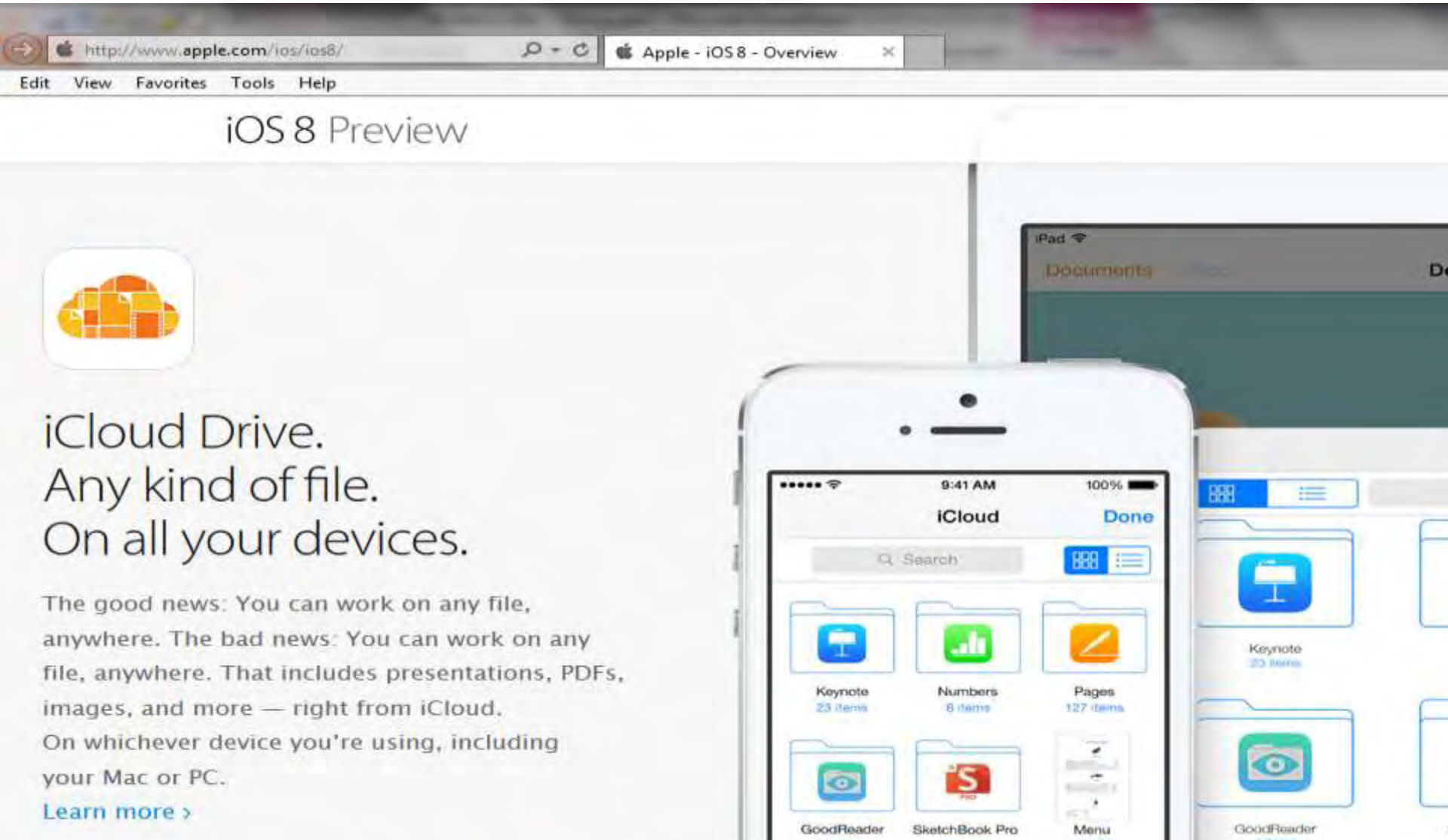
- VoiceOver
- Zoom
- Large Text
- Invert Colors
  - (white on black)
- Speak Selection
- Speak Auto Text
- Mono Audio
- Assistive Touch
- Guided Access
- Home-Click Speed
- Incoming Calls
- Braille Displays

AMAC
Accessibility for All

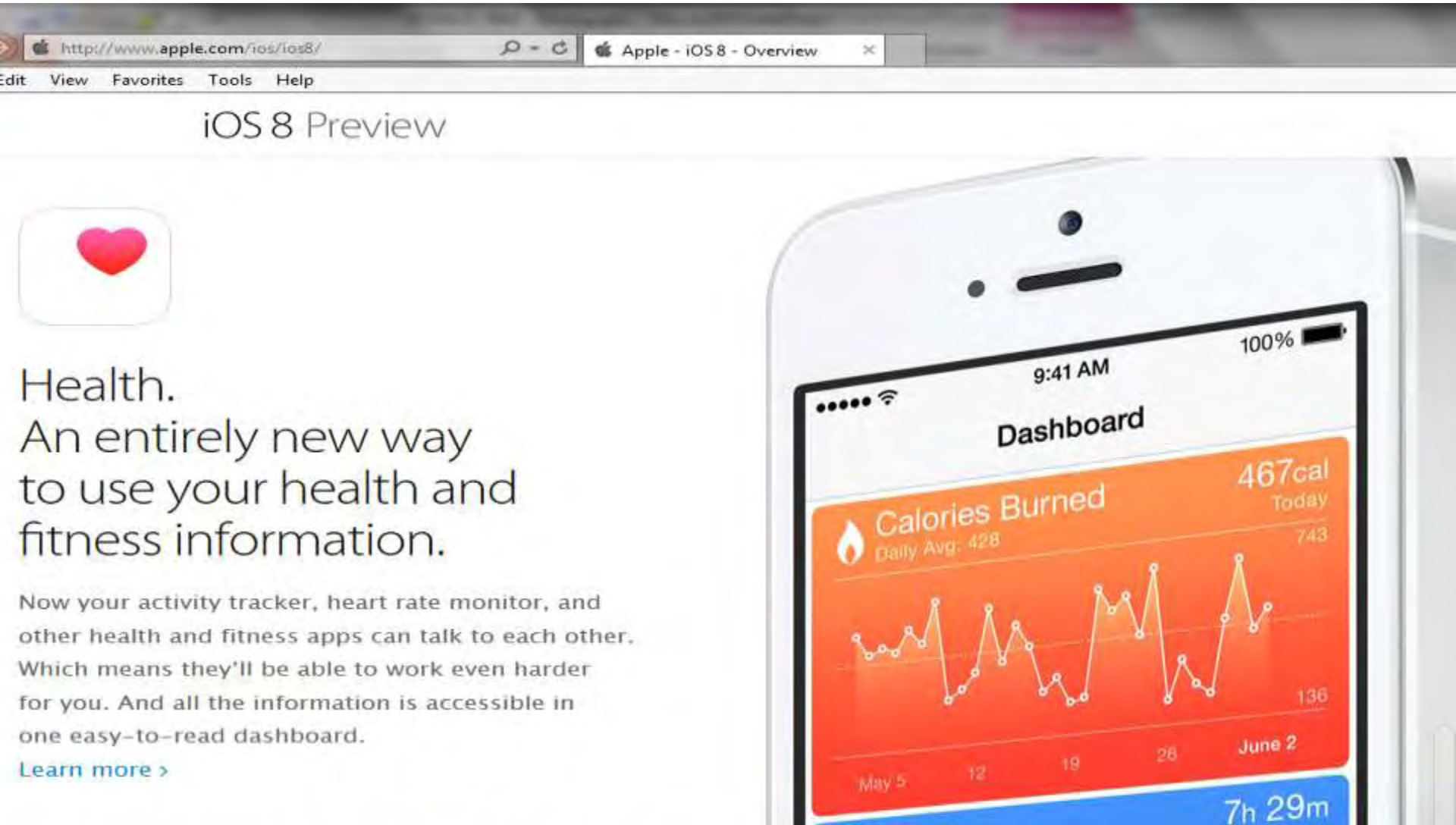
iOS 8 - Fall 2014



iOS 8 - Fall 2014



iOS 8 - Fall 2014



VoiceOver

- Standard feature on iPhones, iPads, and iTouches
- World's first gesture-based screen reader
- DOES NOT WORK WITH ALL APPS
  - Does not work with many eBooks or textbooks
  - Works with built-in apps
- Built-in voices that speak 36 languages
- Adjustable speaking rate
- Echoes each character as you touch it when typing or can speak completed word instead.
- Speak Auto-text
- Has the rotor
- Works with all built-in applications

Assistive Touch

- Lets you enter Multi-Touch gestures using one finger or stylus
  - Create custom gestures
- Supports the use of adaptive input devices
  - Headsets and switches
- Change Tracking Speed

Creating Keyboard Shortcuts

- Go to General => Keyboard and make sure Shortcut is turned on
- Go to Add New Shortcut
- Put in your Phrase
- Create Short Cut
- Example:
  - Phrase : Tools for Life – Georgia's Assistive Technology Act Program
  - Shortcut is: TFL
  - So when TFL is typed it will put in the above Phrase
  - OMW => On My Way!

Reader for Websites

- Read articles and web pages without distractions
- Clutter disappears
- Add link into Reading List and finish later

Guided Access

- Helps remain on task and focus
- Limit to one app / turn off home button
- Restrict touch input on certain areas of the screen

Refurbished Tablets

- If you do not need the latest and greatest consider an older models for a discount
- Want to make sure that refurbish tablets have been certified
- Look for at least 1 year warranty
- Many places now sell
  - Apple
  - BestBuy
  - Amazon

Surface Pro 3

Microsoft Surface

Sign In | Sign Up

Search this site

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

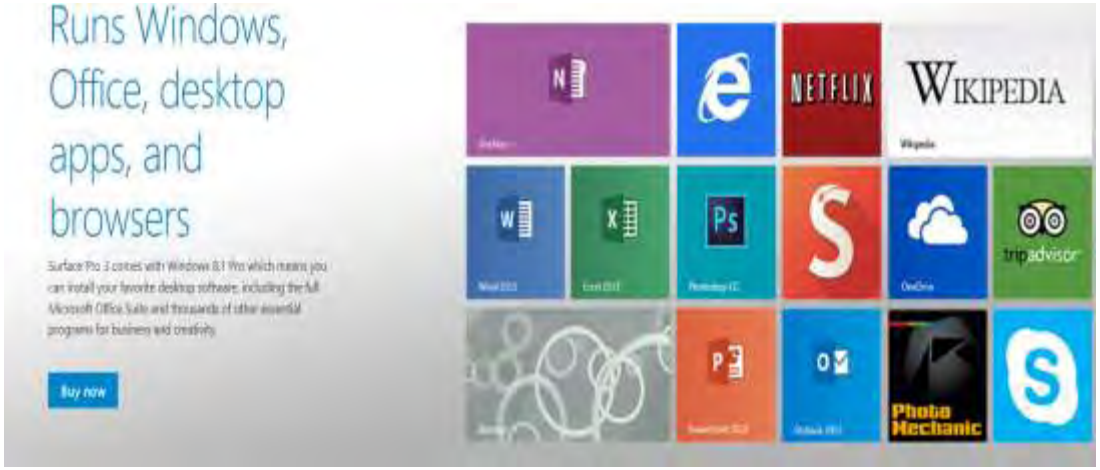
Ready to switch? Trade up your MacBook Air for a Surface Pro 3 now.

See offer

	PORTABILITY	PROCESSING POWER	MULTITASKING
Surface Pro 3	✓ Weighs a mere 2.4lbs and is only 0.55" thin with the keyboard[2] attached	✓ Choose from Intel® Core™ i3, i5, or i7 processors	✓ With Windows 8.1 Pro, you can snap up to 3 apps or desktop programs side by side to multitask with ease
13" MacBook Air	✗ Tips the scales at 2.96lbs and is 0.68" thick	✓ Available with Intel® Core™ i5 and i7 processor options	✗ OS X offers no support for snapping 2 apps side by side, but does allow you to multitask.

Surface Pro 3

- Pro
  - 30 day trial of MS Office
  - Ability to download software
- Open 3 Windows
- Tiles
  - Start screen
- Charms
  - Right hand side



Layout of Surface

- Power Button
- Camera
- Speaker
- Micro USB
- USB
- Charger
- On Left Side
  - Speaker
  - Headphone Jack
  - Volume control

Accessibility of Surface

- Uses Windows 8
  - Ease of Access
- Narrator
- Magnifier
- On-Screen Keyboard
- Windows Speech Recognition

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

Georgia Tech TOOLS for LIFE
Georgia's Assistive Technology Act Program

HOME | ASSISTIVE TECHNOLOGY | TFL NETWORK | CALENDAR OF EVENTS | 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

Welcome to Tools for Life

Tools for Life, Georgia's Assistive Technology Act Program, is [illegible]d 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

ATLANTA ABILITIES EXPO

Abilities EXPO

MAR 14 — Georgia World Congress Center
Hall C4
Atlanta, GA

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

gTRADE

Firefox | Zimbra: Inbox | Tools for Life

www.gatll.gatech.edu/favorite-search.php

GT Mail | Tools for Life | TFL Wiki | AMAC | Facebook | Adobe Connect Centr... | Playbook | TFL Database | Gmail | GT Sites | Eventbrite | Websites | Quickbase | Bookmarks

Georgia Tech TOOLS for LIFE
Georgia's Assistive Technology Act Program

HOME | ASSISTIVE TECHNOLOGY | TFL NETWORK | CALENDAR OF EVENTS | Search our Site | Go

TRAINING

- View Presentations
- Request Training

FUNDING

- Resource & Assistance
- Online Equipment Exchange

RESOURCES

- TFL Newsletter

CONTACT US

- Meet the TFL Team
- Advisory Council

AppFinder

About | Our Other Favorite Apps Databases | Helpful Links

Welcome to the Tools for Life Database - Our Favorite Apps for Living, Learning, Working and Playing!

Search By:

Name:

OR

Category: Please select...

Price: Free | Up to $4.99 | Up to $9.99 | All

Device Type: All | Android | iOS | Microsoft

Search

Add an App | Rate an App | Comments and Suggestions

Version: 1.0

2013 IDEAS CONFERENCE

2013 Institute Designed for Educating All Students Conference
June 3 - 6, 2013
Epworth by the Sea, St Simons Island

- Submit a Proposal
- Conference Website

WEBINARS

APR 18 — Free for All! Resources for Teachers and Students

APR 24 — Assistive Technology and Adapted Recreation: A Perfect Match

Current Webinar Schedule
Webinar Archives

APP FINDER

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

AT ONLINE EXCHANGE

eTRADE, Georgia's Online

TRAINING
View Presentations
Request Training

FUNDING
Resource & Assistance
Dollars & Sense Database
Online Equipment Exchange

RESOURCES
TFL Newsletter

CONTACT US
Meet the TFL Team
Advisory Council
Directions/Map
Join our Mailing List

My Favorite Apps

You searched for: Learning, Cognition, and Developmental

Logo	Name	Category	Device Type
	tango Video Calls Tango brings you free, high-quality mobile voice and video calls over 3G and Wi-Fi! Millions of people around the world are using Tango in an exciting new way. It No Ratings	Learning, Cognition, and Developmental	iOS
app icon	i-promt Professional Tele-prompting software for your iPhone or iPod Touch. No Ratings	Learning, Cognition, and Developmental	iOS
	Dragon Dragon Dictation is an easy-to-use voice recognition application powered by Dragon 5 stars by 1 users	Learning, Cognition, and Developmental	iOS
	iBooks iBooks includes the iBookstore, where you can download the latest best-selling books or your favorite classics No Ratings	Learning, Cognition, and Developmental	iOS
	Say Text SayText reads out loud the text in the image. It is intended for the visually impaired users. SayText is a free spin off product from the DocScanner team.	Learning, Cognition, and Developmental	iOS

2013 IDEAS CONFERENCE

2013 Institute Designed for Educating All Students Conference
June 3 - 6, 2013
Epworth by the Sea, St Simons Island

- Submit a Proposal
- Conference Website
- Exhibitor Details

WEBINARS

APR 18 — Free for All! Resources for Teachers and Students

APR 24 — Assistive Technology and Adapted Recreation: A Perfect Match

Current Webinar Schedule
Webinar Archives

APP FINDER

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

AT ONLINE EXCHANGE

gTRADE — 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.

AMAC
Accessibility for All

SOME OF OUR FAVORITE APPS!

TOLS for LIFE
Georgia's Assistive Technology Act Program

AMAC
Accessibility for

http://www.schrockguide.net/bloomin-apps.html

Learning Ally

- Learning Ally
  - DAISY
  - Membership required
  - over 75,000 audiobooks, audio textbooks, and other recorded books
  - Free Trial

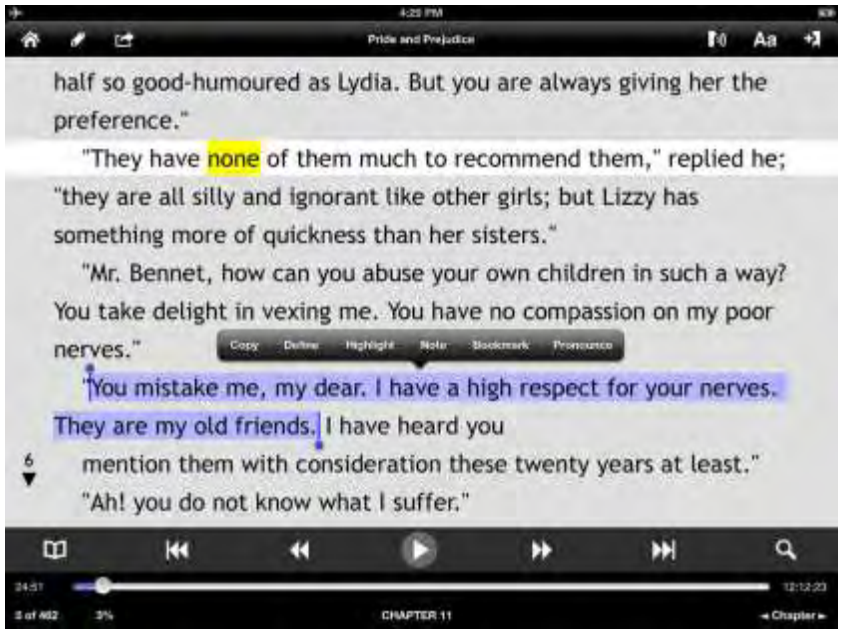
Audible.com

- Digital audiobooks
- Read by Hollywood stars, authors, and professional narrators
- Listen anywhere
- Over 150,000 titles
- Membership
  - $14.95/ month for one book

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



Some Surface Apps

- Maluuba
  - Personal assistant app

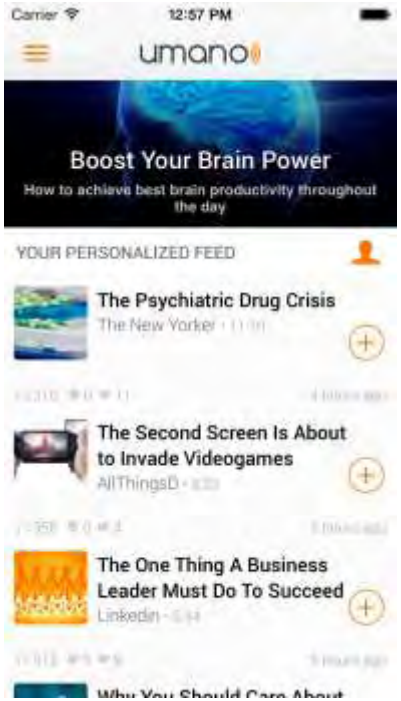
- Apollo
  - Can be a calendar
  - See when the sun sets and rises

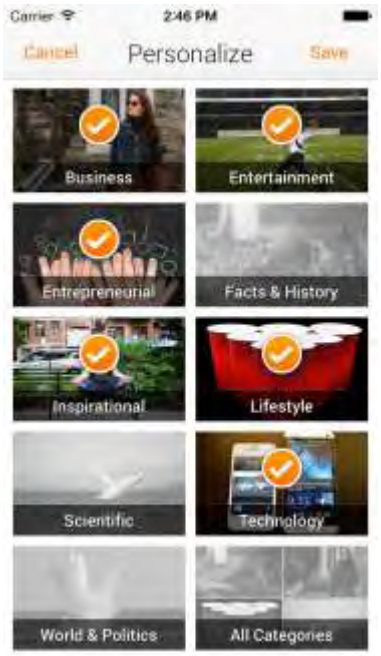
- Barcode Generator
- Free way to create your own barcodes

AMAC
Accessibility for All

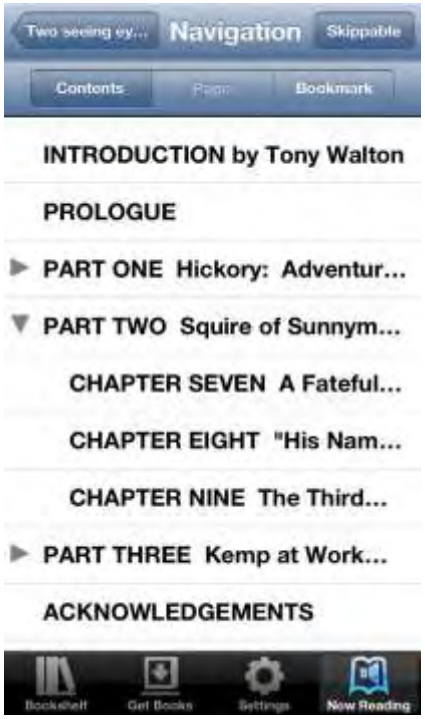
Umano

- 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



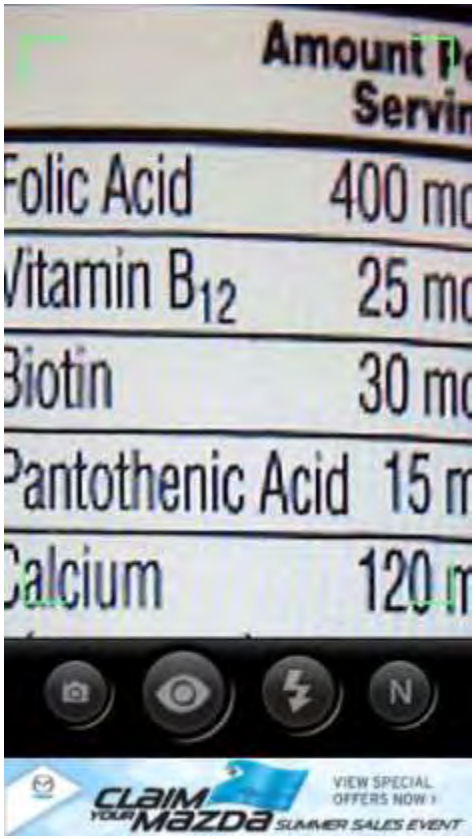


BARD Mobile



- 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
- Free

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

MyMedSchedule

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

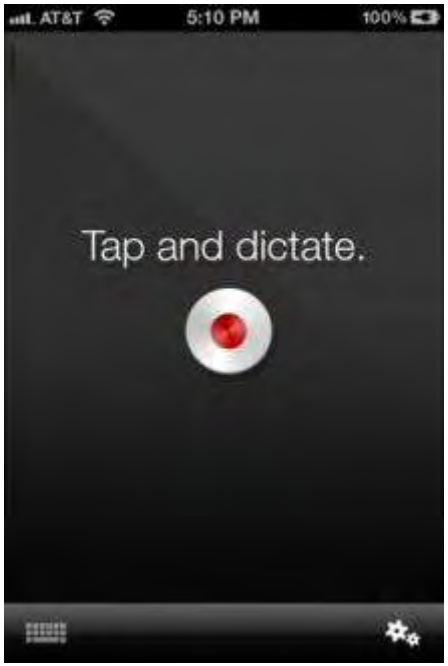
Ginger App

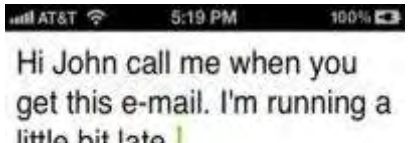
- Free
- Grammar and Spell checker
- Personal Assistant
- Use it to correct text messages, Whatsapp messages, Gmail and Outlook emails, and even social media apps such as Facebook

Pageonce

- Free
- Keep track of your cash and credit cards
- Pay your bills
- Real-time alerts and reminders about upcoming bills, overage charges, and suspicious transactions
- Understand your debt

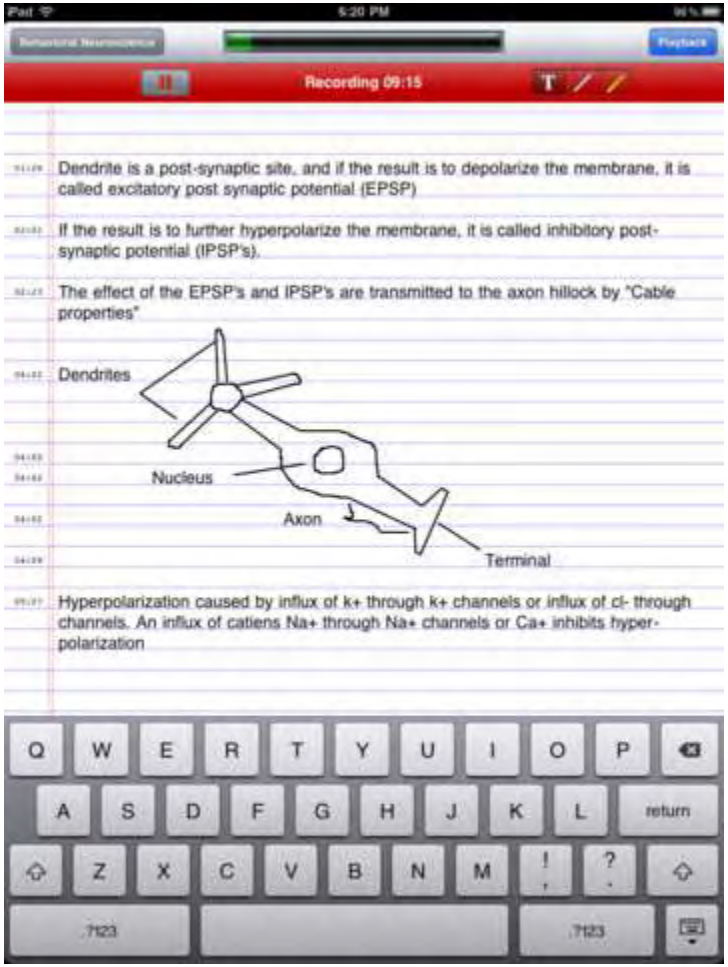
Dragon Dictation





- 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

Perfect OCR

- $3.99
- Uses the built in camera to scan documents

Edit, copy, store, email documents

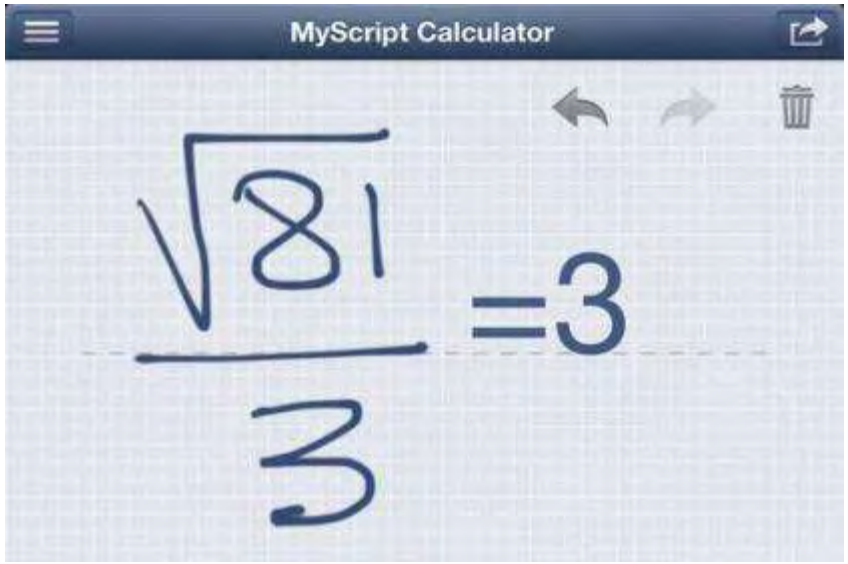
Upload to online storage is as Evernote

Does take practice for picture

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

MyScript Calculator



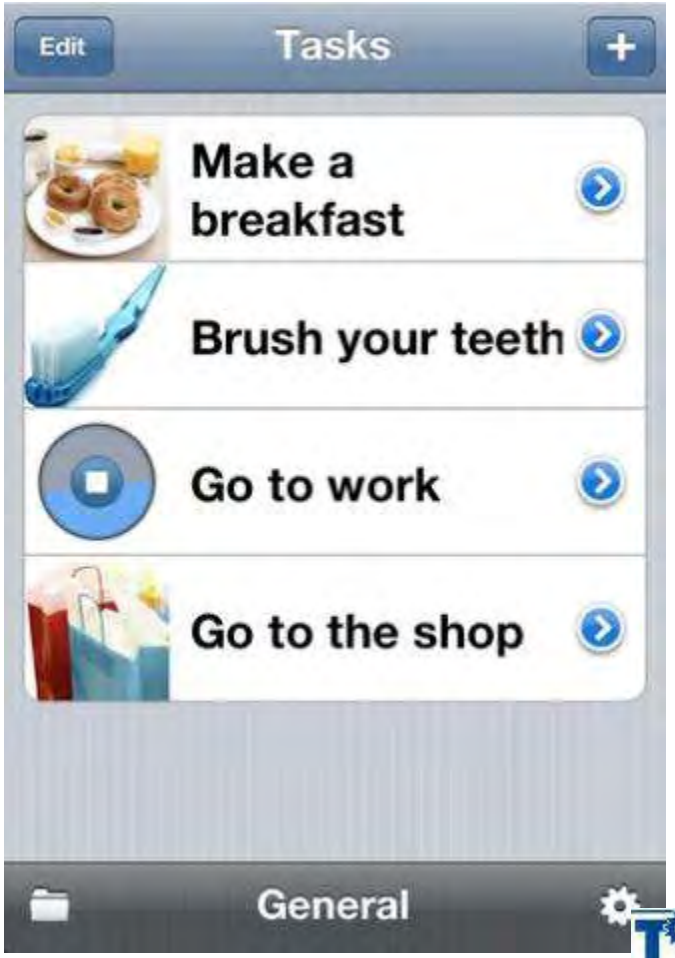
- Use your handwriting to write any arithmetic formula
- Write and calculate mathematical expressions in with no keyboard
- Scratch-out gestures to easily delete symbols and numbers
- Portrait and landscape operation
- Redo and undo functions

Money Counter Calculator

- iPad only
- Enter amount of coins and dollars and total is provided
- Free

Picture Scheduler

- Create visual tasks with attached audio, video or picture
- Tasks can have alarms
- Alarms can be repeated daily, weekly, monthly or you can select specific weekdays
- Tasks can be organized into categories with a picture
- Can hide task and reveal later

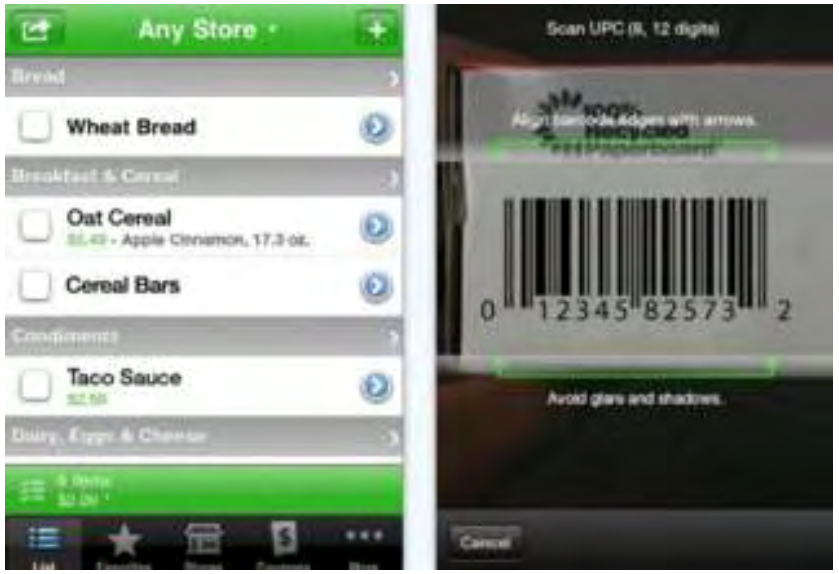


Cozi

- 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.

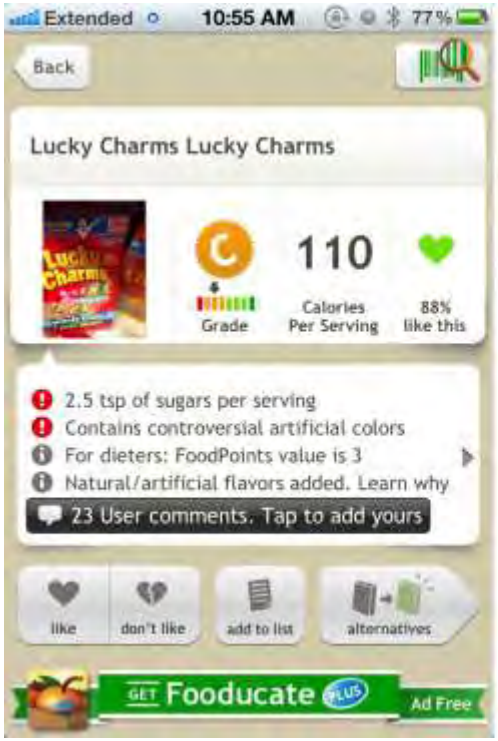
Grocery IQ

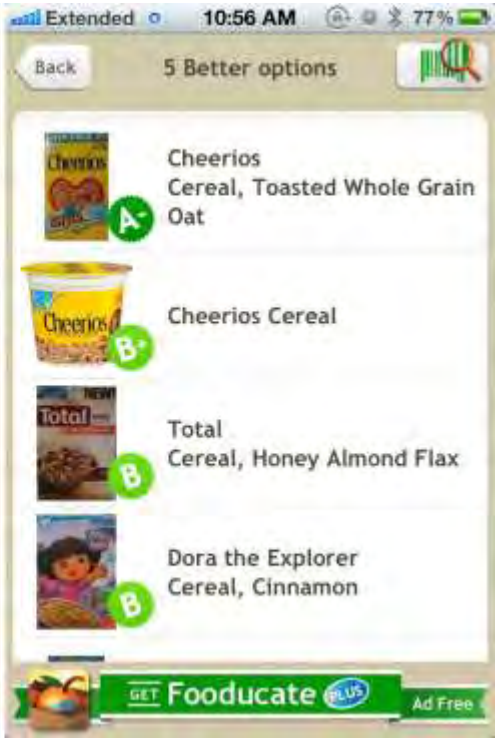
- Pictorial shopping list
- Customize different lists for different users using pictures on camera roll
- Add your own items and categories
- Assign item prices
- Assign item locations (for example, aisle numbers)
- Several accessibility options
  - text-to-speech
  - uses large easy-to-see images
 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



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





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

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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
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- Download maps for offline viewing
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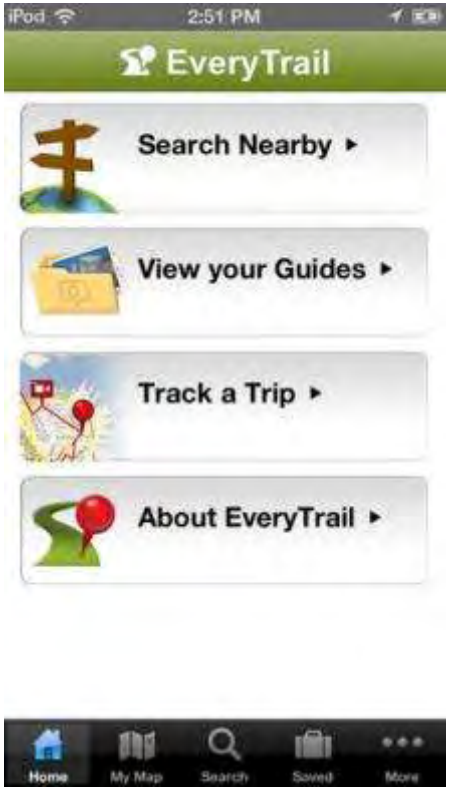

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iMovie

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

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

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

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Pandora

- Free internet radio
- Create custom stations based on genre
- Free

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

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Brainwave Starter Kit takes decades of laboratory EEG technology research and puts it in your hands. Simply slip on the headset and see your brainwaves change in real time. Monitor your levels of attention and relaxation, and learn about how your brain responds to your favorite music. With more than 100 brain training games and educational apps available through our store, there are plenty of options to choose from based on your age and personal interests. It's an excellent introduction to the world of brain-computer interface!
The MindWave Mobile headset transfers data via Bluetooth™ to wirelessly communicate with your computer and mobile devices (iOS and Android). You can also write your own programs to interact with MindWave Mobile by using our free developer tools (available online).

Overview
The MindWave Mobile safely measures and outputs the EEG power spectrums (alpha waves, beta waves, etc), NeuroSky eSense meters (attention and meditation) and eye blinks. The device consists of a headset, an ear-clip, and a sensor arm. The headset's reference and ground electrodes are on the ear clip and the EEG electrode is on the sensor arm, resting on the forehead above the eye (FP1 position). It uses a single AAA battery with 8 hours of battery life.

MindWave Mobile
- Uses the TGAM1 module
- Automatic wireless pairing
- Single AAA Battery *(Not included)*
- 8-hours battery run time
- Bluetooth v2.1 Class 2 (10 meters range). Bluetooth dongle *not included*.
- If you do not have Bluetooth on your PC/Mac, here are details on recommended Bluetooth dongles

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Ten days with Google Glass

By Will Shanklin
December 23, 2013

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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 w
tech. So we thought it was fitting to sign up for the Google Glass Ex
program, to give you a better idea of what Sergey Brin and compa
brewing up in Mountain View. Though we aren't quite ready to di
proper Google Glass review, we want to share some more thou
our first ten days with Glass.

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

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Review
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LEAP MOTION

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MIT Finger Device Reads to the Blind in Real Time

In this Thursday, June 26, 2014 photo, a model wears a FingerReader ring at the Massachusetts Institute of Technology's Media Lab in Cambridge, Mass. Researchers designed and developed the instrument, which enables people with visual disabilities to read text printed on paper or electronic devices. (AP Photo/Stephan Savoia) AP

By RODRIQUE NGOWI
Associated Press

JULY 8, 2014 1:24 AM

SCIENCE AND TECHNOLOGY

Wearable computing gloves can teach Braille, even if you're not paying attention

Posted June 23, 2014 | Atlanta, GA

Several years ago, Georgia Institute of Technology researchers created a technology-enhanced glove that can teach beginners how to play piano melodies in 45 minutes. Now they've advanced the same wearable computing technology to help people learn how to read and write Braille. The twist is that people wearing the glove don't have to pay attention. They learn while doing something else.

"The process is based on passive haptic learning (PHL)," said Thad Starner, a Georgia Tech professor and wearable computer pioneer. "We've learned that people can acquire motor skills through vibrations without devoting active attention to their hands."

In their new study, Starner and Ph.D. student Caitlyn Seim examined how well these gloves work to teach Braille. Each study participant wore a pair of gloves with tiny vibrating motors stitched into the knuckles. The motors vibrated in a sequence that corresponded

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College of Computing Professor Thad Starner, director of the Contextual Computing

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JULY 10, 2014

Musical Glove Improves Sensation, Mobility for People with Spinal Cord Injury

Jul 17, 2012 | ***Atlanta, GA***

Georgia Tech researchers have created a wireless, musical glove that may improve sensation and motor skills for people with paralyzing spinal cord injury (SCI).

The gadget was successfully used by individuals with limited feeling or movement in their hands due to tetraplegia. These individuals had sustained their injury more than a year before the study, a time frame when most rehab patients see very little improvement for the remainder of their lives. Remarkably, the device was primarily used while the participants were going about their daily routines.

The device is called Mobile Music Touch (MMT). The glove, which looks like a workout glove with a small box on the back, is used with a piano keyboard and vibrates a person's fingers to indicate which keys to play. While learning to play the instrument, several people with SCI experienced improved sensation in their fingers.

Researchers at Georgia Tech and Atlanta's Shepherd Center recently completed a study focusing on people with weakness and sensory loss due to SCI.

"After our preliminary work in 2011, we suspected that the glove would have positive results for people with SCI," said Ph.D. graduate Tanya Markow, the project's leader. "But we were surprised by how much improvement they made in our study. For example, after using the glove, some participants were able to feel the texture of their bed sheets and clothes for the first time since their injury."

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Mobile Music Touch Video

Mobile Music Touch Glove 1

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Georgia's Assistive Technology Act Program

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by David Salisbury | Posted on Saturday, Mar. 23, 2013 — 1:11 PM

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