



Galloway School: Technology Strategies & Solutions Success

Carolyn Phillips

With contributions from Martha Rust, Liz Persaud & Ben Satterfield

www.gatfl.org



Agenda

- Welcome to the 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 students of all abilities. 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>

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.



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



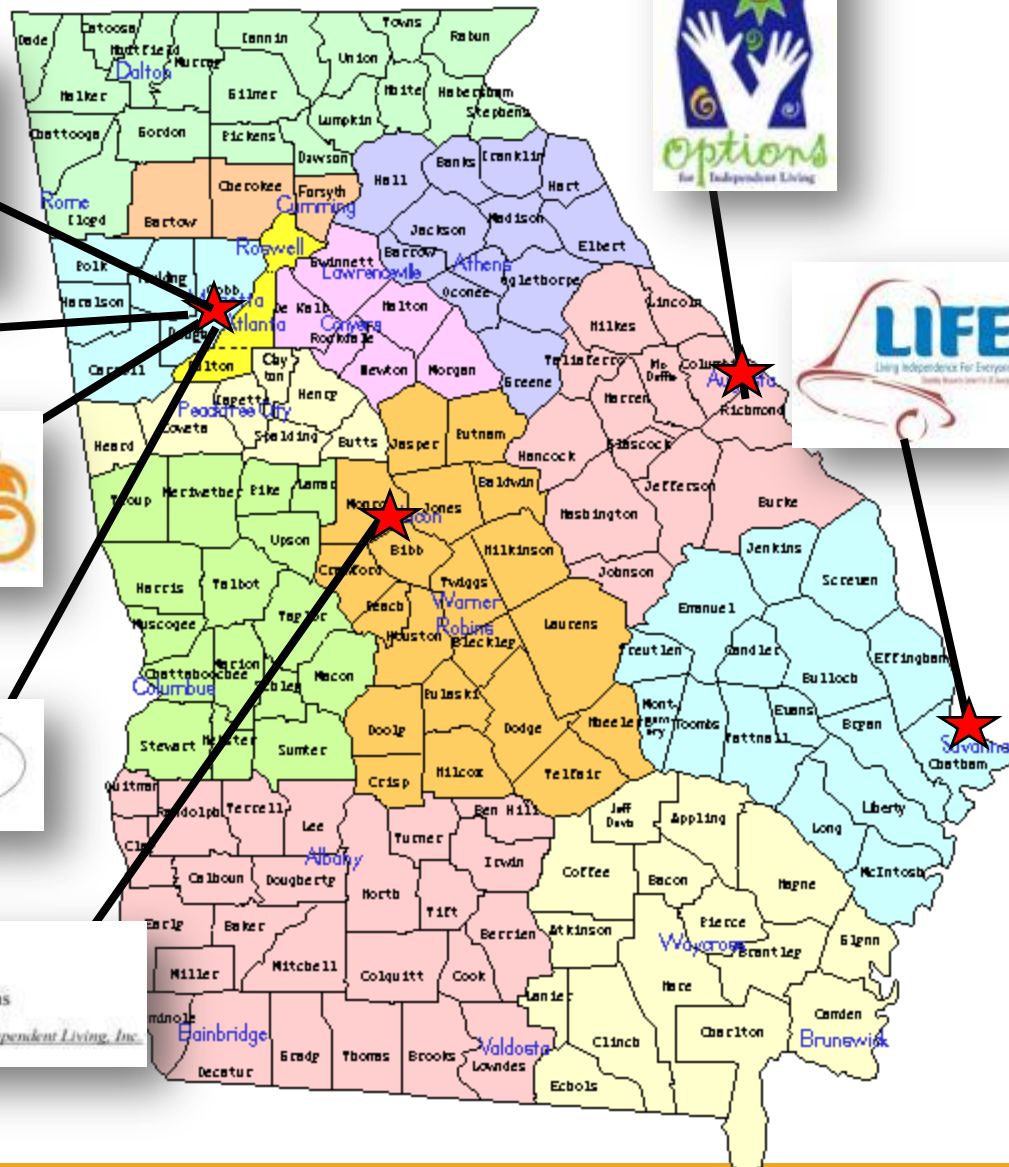
The Tools for Life Network

Georgia's Federal AT Act Program



Services Include:

1. AT Lending Library
2. AT Evaluations & Training
3. AT Demos
4. Resource and Assistance
5. AT Funding Assistance
6. AT & DME Reuse



Come Visit Us!

- 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

Find Your AT Solutions



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.

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.

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

TRAINING

FUNDING

PUBLICATIONS

TFL WIKI

MEET THE TFL TEAM

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DIRECTIONS/MAP

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MAILING LIST

SCHEDULE A TOUR

Welcome

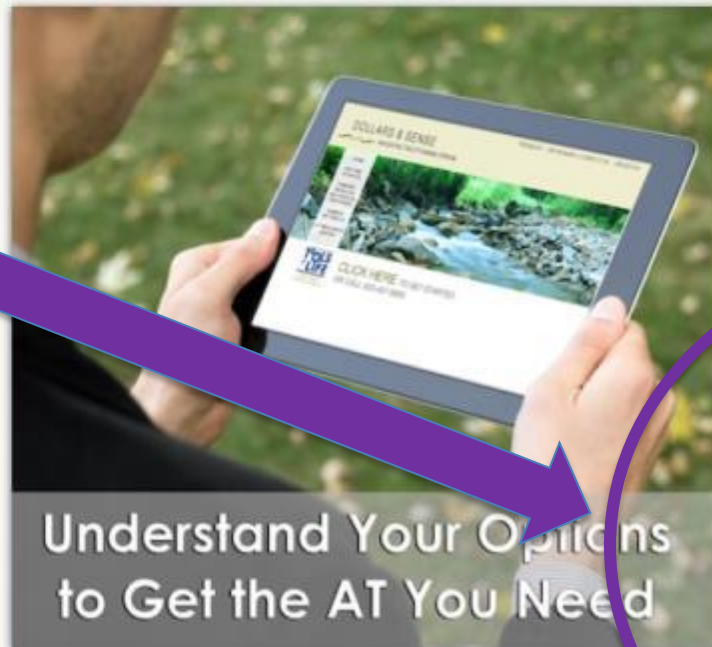
AT Services

Try AT

Get AT

AT Guides

Research



Understand Your Options to Get the AT You Need

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](#)

ATLANTA ABILITIES EXPO

Abilities EXPO

MAR
11Georgia World Congress Center
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FEB
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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



Normal mode: You can dictate and use voice commands

ProfileToolsVocabularyModesAudioHelp

firefox

Zimbra: InboxAssistive Technology Solutions for Li...

www.gatfl.gatech.edu

GT MailTools for LifeTFL WikiAMACFacebookAdobe Connect Centr...PlaybookTFL DatabaseGmailGT SitesEventbriteWebsitesQuickbaseMailChimpBookmarks

Georgia Tech

TOOLS for LIFE

Georgia's Assistive Technology Act Program

HOMEASSISTIVE TECHNOLOGYTFL NETWORKCALENDAR OF EVENTS

Search our Site

TRAINING

View Presentations

Request Training

FUNDING

Resource & Assistance

Dollars & Sense

gTRADE

RESOURCES

TFL Newsletter

CONTACT US


Meet the TFL Team

Advisory Council

WelcomeAT ServicesTry ATGet ATAT GuidesResearch


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.

2013 IDEAS CONFERENCE

2013 Institute Designed for Educating All Students Conference

June 3 - 6, 2013

Epworth by the Sea, St Simons Island

Conference Registration

Conference Website

Exhibitor Details

WEBINARS

MAY 29

A Closer Look at Apps and the Tools for Life AppFinder: A Live Demo


JUL 17

Social Security 911: Understanding Your Rights & Resources

Current Webinar Schedule

Webinar Archives

TOOLS FOR LIFE APPFINDER



...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

11:32 PM 5/27/2013

Tools for Life AT Demo Lab

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





Increase in “**Twice Exceptional**”

- “The term **twice exceptional**, often abbreviated as **2e**, refers to intellectually gifted students who have some form of disability or significant challenge.^[1] These children are considered both because of their intellectual gifts and because of their unique needs.”
 - *<http://www.wrightslaw.com/info/2e.index.htm>*



Increase in “Twice Exceptional”

Federal Definition of "Giftedness"

The US government defines "Gifted & Talented" students as those... *"who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services or activities not ordinarily provided by the school in order to fully develop those capabilities."* 20 U.S.C. Section 7801(22). ([Wrightslaw: No Child Left Behind](#), Title IX, Part A, (22). p. 526)



Increase in “**Twice Exceptional**”

Twice-exceptional children are gifted children of above average abilities who have special educational needs - AD/HD, learning disabilities, Asperger Syndrome, etc. Because their giftedness can mask their special needs and their special needs can hide their giftedness, they are often labeled as "lazy" and "unmotivated".

- *<http://www.wrightslaw.com/info/2e.index.htm>*

The Neurology of My Brain

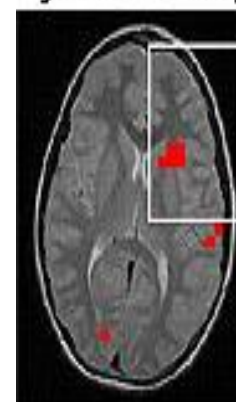
The “rate” at which you learn will become the only sustainable competition advantage you’ll have in your life.

- Peter Senge

- Visual Perception & Discrimination
- Auditory Perception & Discrimination

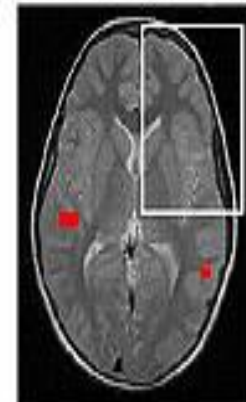


Dyslexic Example



←
Left
Anterior

Control Example

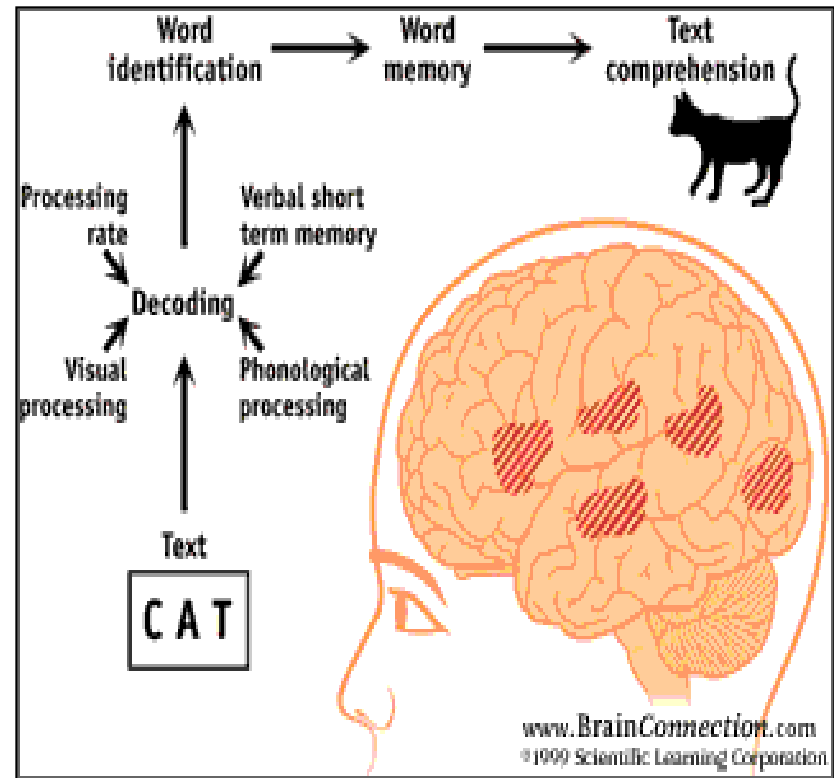


←
Left
Anterior

The Neurology of My Brain

Visual Modality

- Pound
- Proud
- Grill
- Girl
- Earth
- Heart



Consider this...

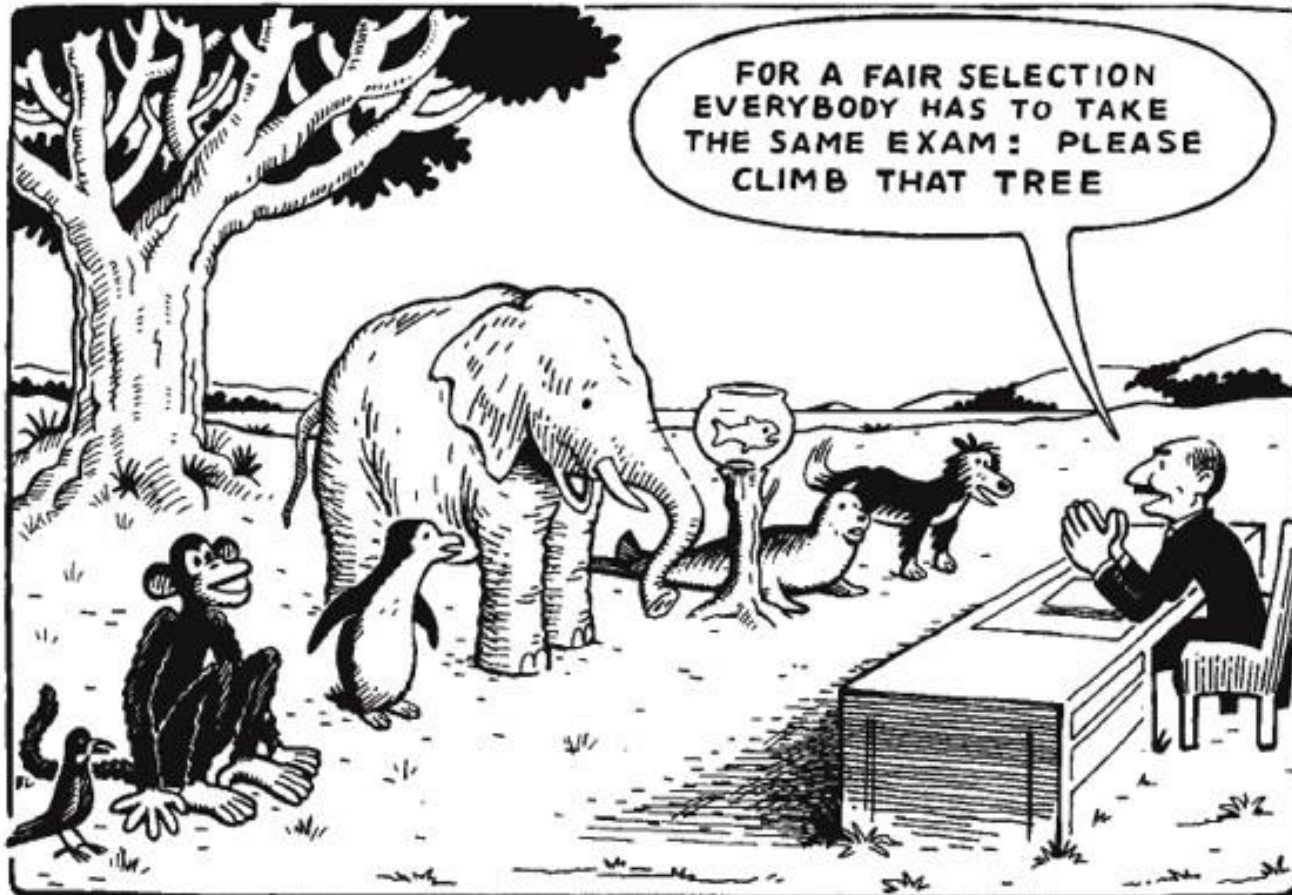
Time Magazine, March 26, 2001

"Blame it on the Written Word"

By Unmesh Kher

- **English has 1120 different spellings for ~44 phonemes**
- **Italian has 33 different spelling for 25 phonemes**
- **English is notoriously illogical**

Universal Design for Learning Implementation



Universal Design for Learning Implementation



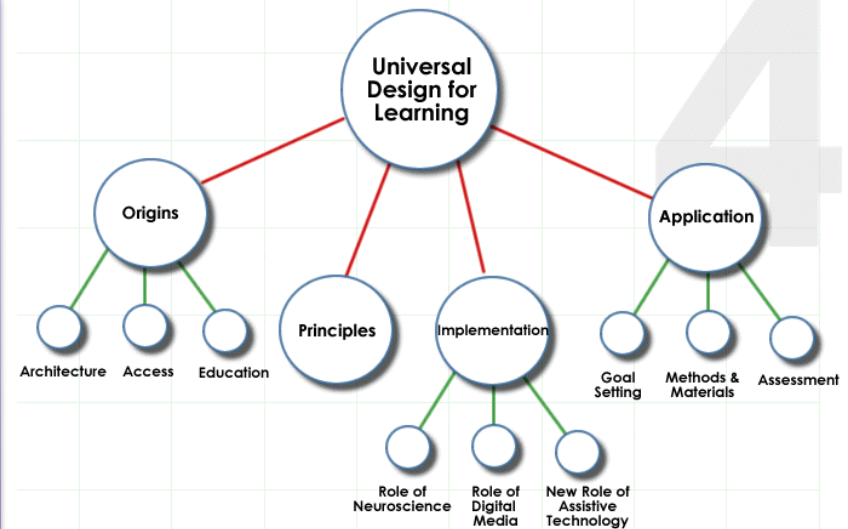
Role of Neuroscience



Role of Digital Media



New Role of Assistive Technology





Glogster EDU - Multimedia Poster

- Representation
 - Video, audio, images and text
 - Present curriculum information in an engaging, interactive manner
- Expression
 - Collaborative
 - Presentation alternative

Flickr — Online photo and video sharing

- **Representation**
 - Annotations to photos as prompts, provide information
 - Visually represent ideas, curricular concepts
- **Expression**
 - Collaborative or individual use of annotations by students
 - Alternative presentation formats



Real-Time Student Engagement

- **iResponse & iResponse Pro on the iTunes App Store** (\$4.99 for iResponse Pro – the utility to create and send, \$.99 for iResponse – the utility students use to take and send back.)
 - <http://iresponseapp.com>
 - Can create and send quizzes to up to 35 devices
 - See responses from students in real time on your computer
 - A Mac/PC utility allows you to create, then send (broadcast) the quizzes
 - Launch application on your computer to begin class. On iPad, iPods, etc. log in with the App. Send questions from computer to students logged in.



Real-Time Student Engagement

- **TestMaker (\$0.99 on iTunes App store)**
- **http://www.phonetai.com/Phonetai_Software/TestMaker.html**
- Create tests on iPad, iPod or iPhone or on computer and sync for use to iPad, iPod or iPhone to use
- Can send tests via e-mail
- Can make quizzes on iPad/iPod for learning. Student can use for review. Program will grade test taken as a percentage grade. Can set random order, time limits, export quiz.



Real-Time Student Engagement

- **QuickieQ**
- **<http://www.questionpress.com/>** - response system utilizes internet access, accessible from any device
- Types of quizzes include Yes/No, True/False, Multiple Choice, Short Answer
- Fill in the Blank, Essay, Check All that Apply with optional text field, Rate
- Sort, Numeric, File Uploads, Multiple Choice with Images for Answers
- Free trial account, \$24.00 per year for up to 35 responders in a session
- Grades, utilizes QuestionPress server for processing, storage, etc.
- Runs from their website, participants log in onto website. Can access from computers or portable devices.

UDL Resources

CAST

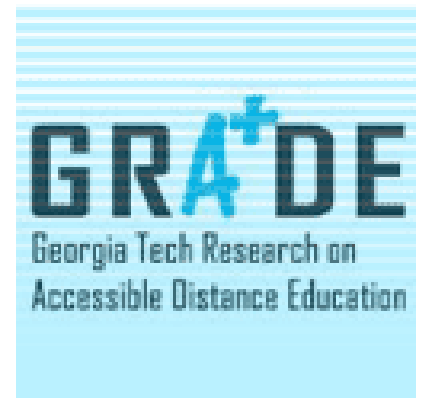
<http://www.cast.org/http://www.cast.org/>

GRADE

<http://catea.org/grade/>

DOIT

<http://www.washington.edu/doit/>



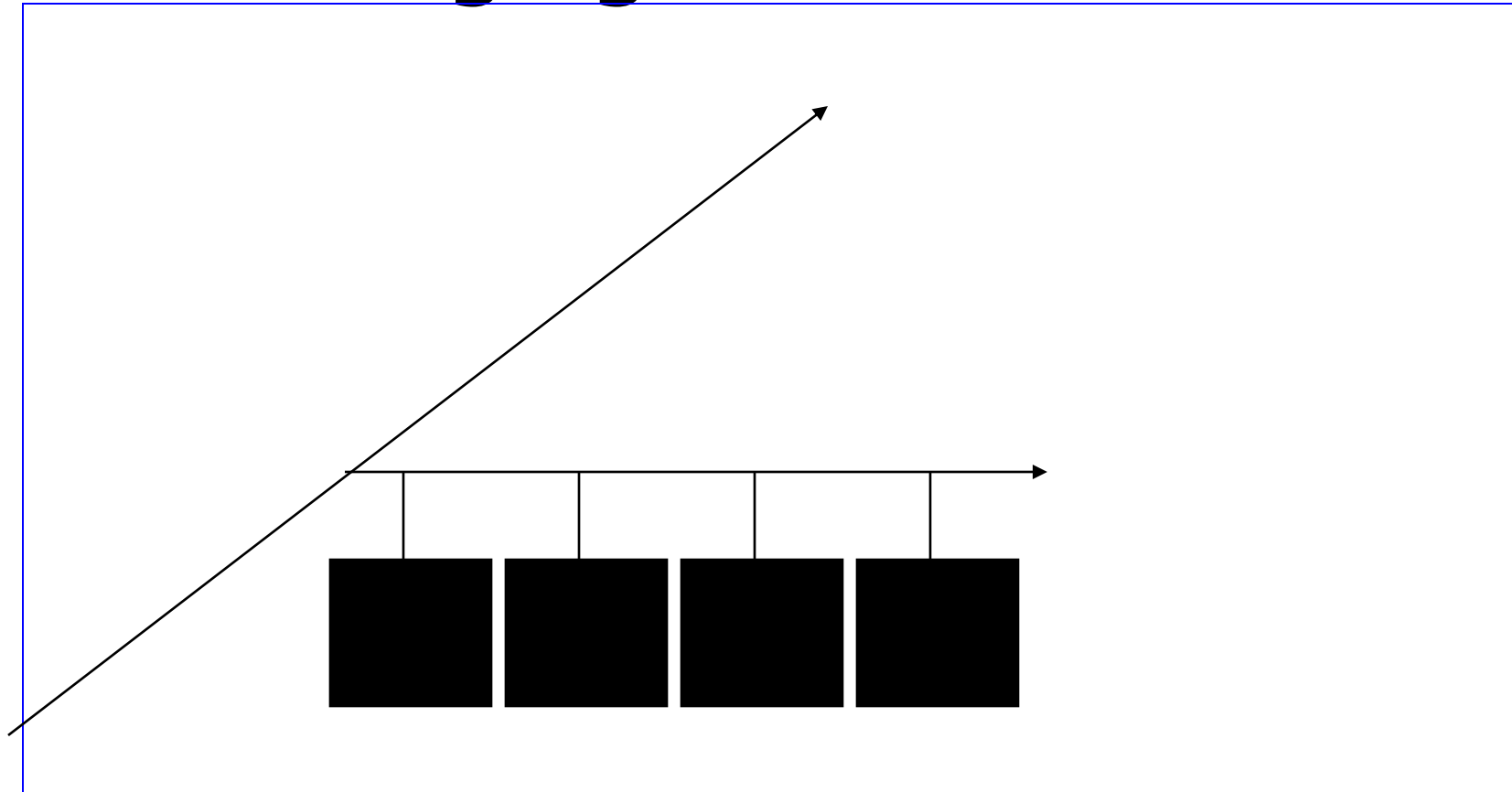
SETT: Technology Assessment

- **S** for the Student
- **E** for the Environment
- **T** for the Tasks
- **T** for the Tools needed for the student to address the tasks.

• Joy Zabala!

Reading			
Directions: 1. Choose student description, environment and task (or fill in your own). 2. Trial corresponding tools/techniques. 3. Indicate if the tool/technique is effective for this student. If tool/technique is effective, continue use. If tool/technique is not effective, stop. 4. Attach work samples/data collection/notes.			
STUDENT	TASK	TOOLS/TECHNIQUES	EXPLANATION
1. Student is unable to hold reading materials open	Read text books, worksheets	• Book holder (EZ Book Clip*) • Page holder (Page Up*)	
2. Student has difficulty seeing text (visual, letters reversed, too small, etc.)	Read textbooks, worksheets, chalkboard, computer	• Preferential seating. • Enlarge print on copy machine or computer • Reduce number of items on page (spacing) • Magnify text (Magnifying bar*) • Highlight text (Highlighter Tape*) • Reading guide (Reading Helper*) • Highlight text area (Heads up Frame Set*) • Highlight full page of text (Colored Transparencies*)	
3. Student has difficulty reading on a flat (horizontal) surface	Read silently, read in groups, seat work	• Slanted surface (3 ring loose leaf binder, slant board) • Page Holder to see paper vertically (Page Up*)	
4. Student loses place while reading (tracking)	Read text books, chalkboard, worksheets (all reading assignments)	• Preferential seating • Isolate text (with plain paper) • Isolate text (Ruler or Reading guide*) • Magnify text (Magnifying bar*) • Reading guide (Reading Helper Set*)	

Promoting Strengths & Managing Weaknesses



Keyboarding

- Web sites with free typing instructions:
- www.sense-lang.org/typing
- www.bbc.co.uk/schools/typing
- www.tyingsoft.com

Abbreviation Expanders

- Abbreviation Expanders benefits students who struggle with writing.
 - WordQ
 - Reach
 - Typelt4Me (Shareware)
- Used with word processing, these software programs allow a user to create, store, and re-use abbreviation for frequently used words or phrases. This can save the user keystrokes and ensure proper spelling of words and phrases he/she has coded as abbreviations.



Ginger

- www.gingersoftware.com
- Online Grammar and Spell Check
- Check whole sentence- “context- based” corrections
- Text-to-Speech
- Progress Reports
- 14 day free trial

[SMARTPEN](#)[STORE](#)[COMMUNITY](#)[DEVELOPERS](#)[SUPPORT](#)[K-12 EDUCATION](#)[COMPANY](#)[home](#) > [smartpen](#) > [pulse smartpen](#)[1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#)**Audio Jack****Speaker****Microphone****USB Connector****Ink Cartridge**
sound: on

Introducing Pulse™

The Pulse smartpen records and links audio to what you write, so you never miss a word.

To learn more about Pulse's features and how it works, just move your mouse over the smartpen and click for more information.



See a live demo of MacSpeech Dictate



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The Best of Both Worlds

Don't limit your speech recognition world to either your Mac or PC.

With MacSpeech Dictate and Dragon NaturallySpeaking you can enjoy the best of both worlds. To celebrate MacSpeech joining the Nuance family, you can get a generous 20% discount - that's a savings of over \$39 - on your purchase of either MacSpeech Dictate or Dragon NaturallySpeaking. This is a limited time offer, so get yours today.

[Explore the Best of Both Worlds ▶](#)



MacSpeech Joins Nuance

MacSpeech is now a part of the Nuance family.



[Learn More](#)

Meet the Family

Discover the world of premier speech recognition solutions for the Mac. No matter your need, MacSpeech Dictate has you covered.



Let Freedom Ring

Get MacSpeech Dictate with the Plantronics Calisto Headset with Bluetooth USB Adapter.

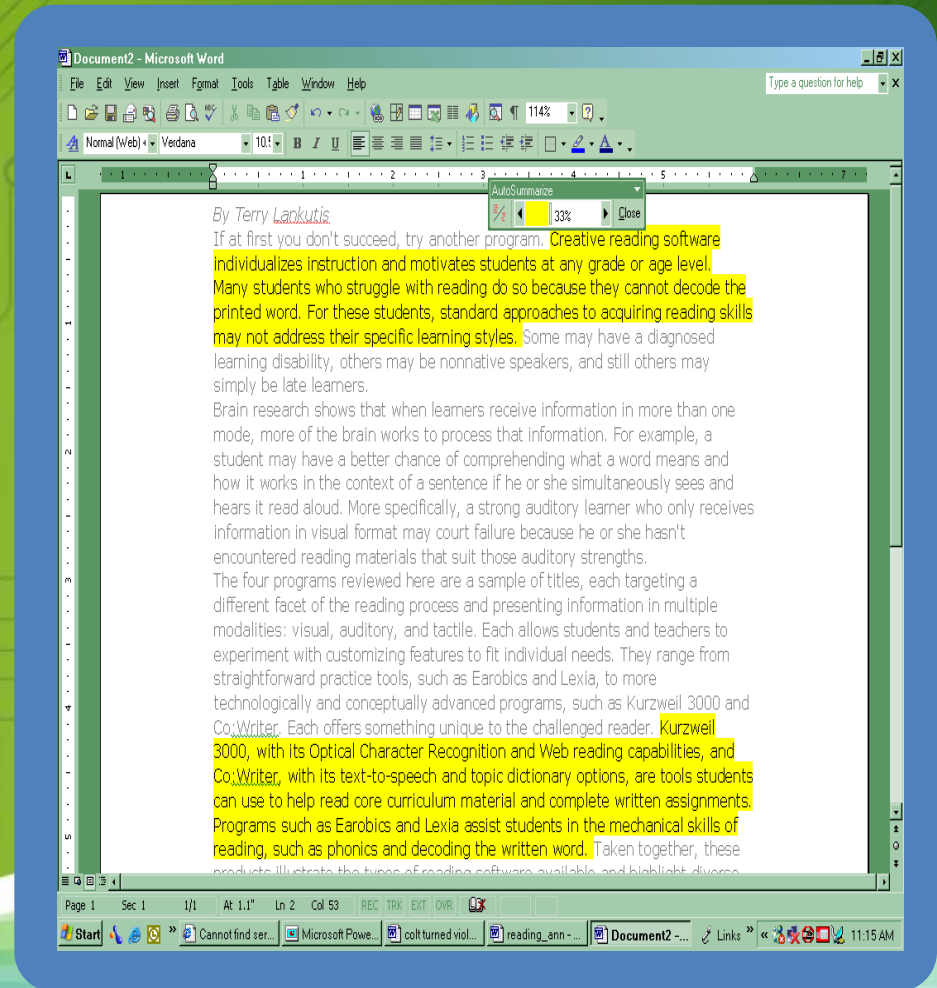


[Learn More](#)

Mainstream Technology

- Microsoft Word

- Auto-correct
- Auto text
- Auto summarize
- Templates
- Formatting
- Highlighters



What is Ergonomics

- Greek word: Laws of Work
- Science that studies work in various environments, and the tools used to perform tasks in those environments
- Goal: match the capabilities and “limitations” of the human body





Areas of Concern for Students

- Educational Environments

- Classroom
- Cafeteria
- Playground

- Computers

- Mobile devices

- Backpacks

- Recreation

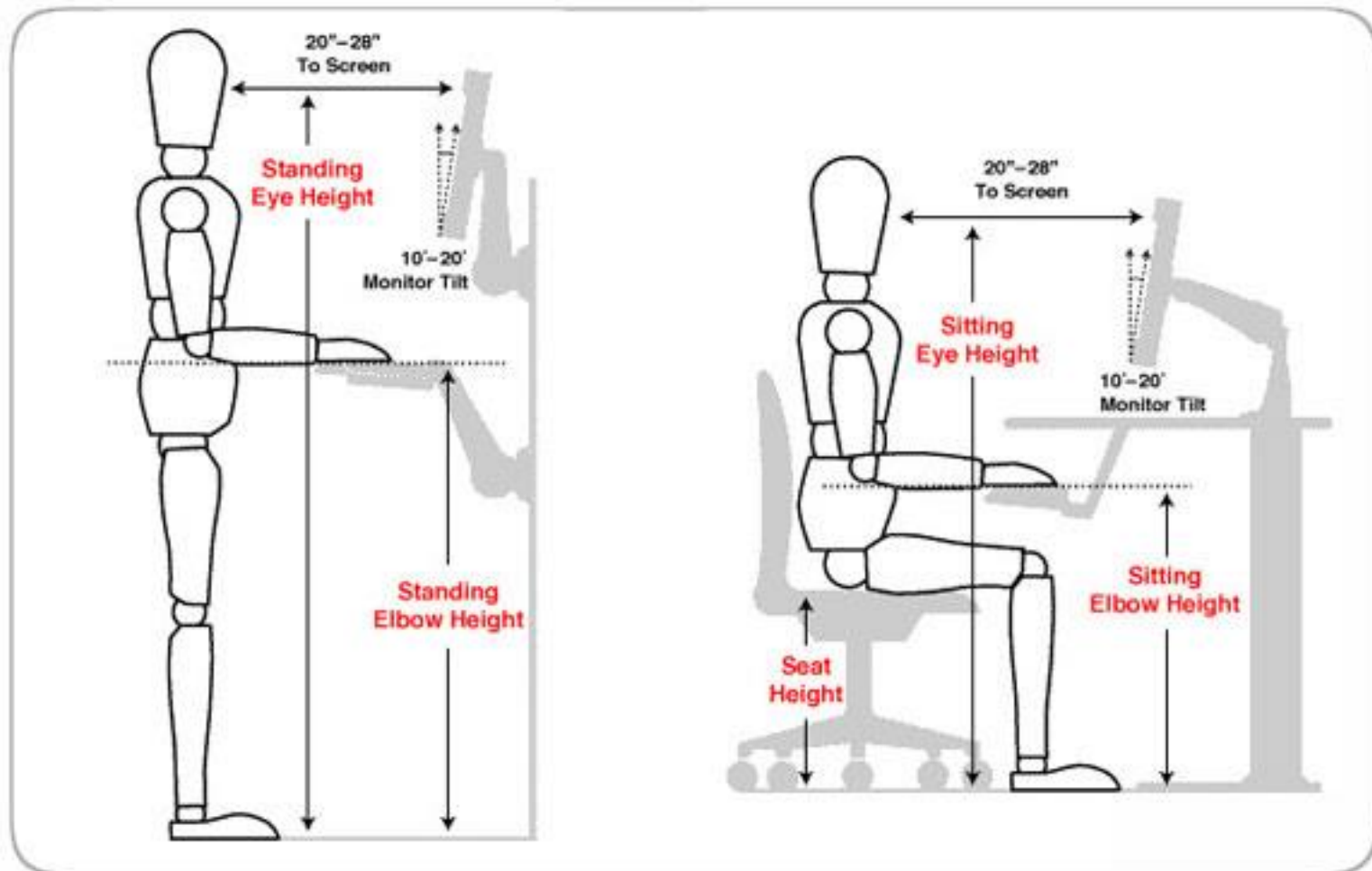
- Electronics/gaming

Poor Sitting Posture

- Inhibits blood flow
- Creates muscle shortening
- Stresses back muscles and compresses spine
- Can inhibit learning
- Compresses diaphragm
 - Affects breathing
 - Voice quality



Ergonomics in the Classroom



Ergonomics in the Classroom

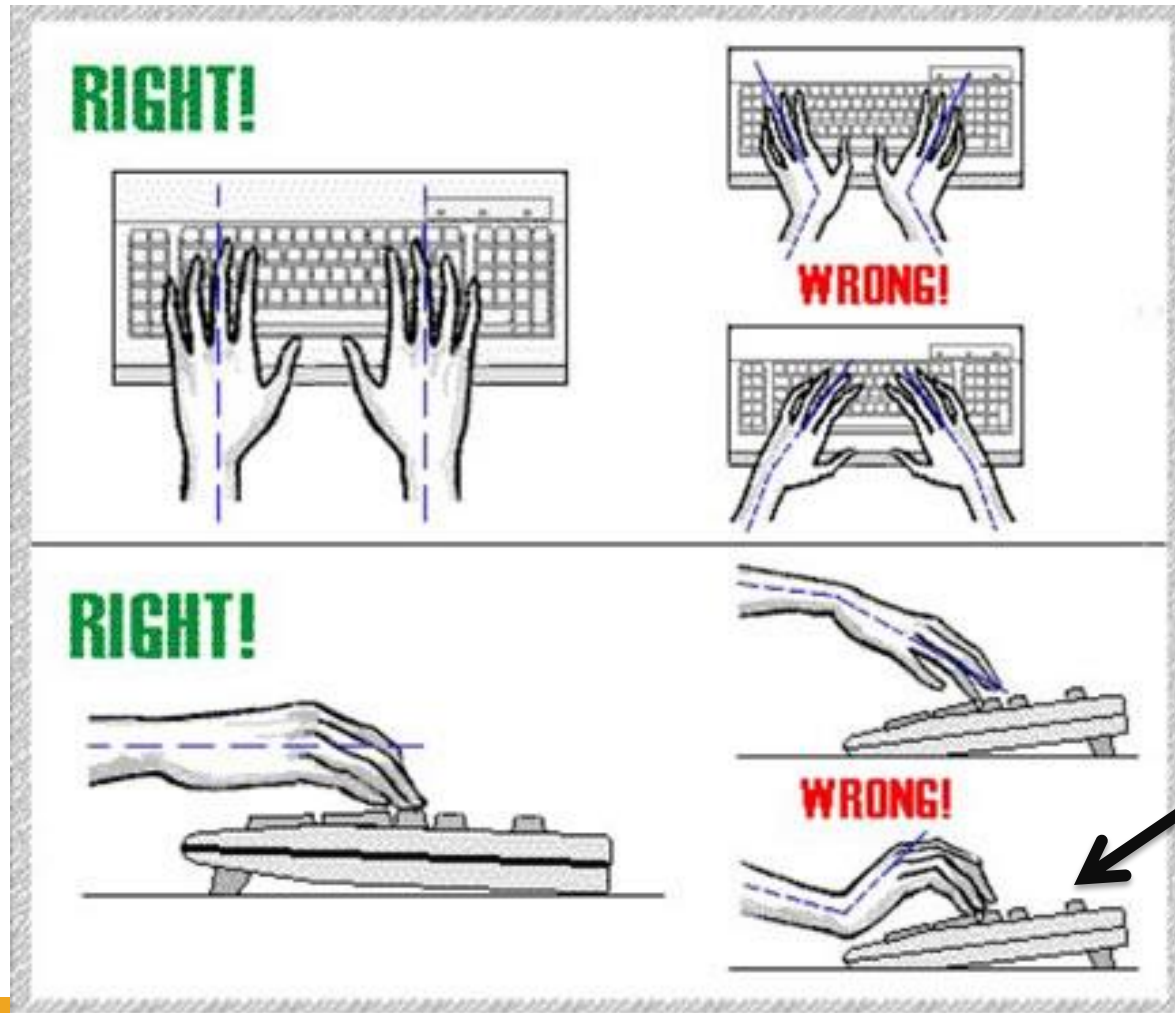
Stand Up For Your Health

Physiologists And Microbiologists Find Link Between Sitting And Poor Health

June 1, 2008 — Physiologists analyzing obesity, heart disease, and diabetes found that the act of sitting shuts down the circulation of a fat-absorbing enzyme called lipase. They found that standing up engages muscles and promotes the distribution of lipase, which prompts the body to process fat and cholesterol, independent of the amount of time spent exercising. They also found that standing up uses blood glucose and may discourage the development of diabetes.



Ergonomics in the Classroom



Ergonomics in the Classroom

Writing Solutions:



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

<http://ergonomics.about.com/od/buyingguide/fr/frpenagain.htm>



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





Movement Helps Learning!

- 2003 study in *American Journal of Occupational Therapy* concluded that students with ADHD using ball chairs were able to sit still, focus and write more words legibly
- 2007 Mayo Clinic study concluded that a chair-less classroom increased attention and improved learning
- 2008 University of Central Florida study
 - children need to move to focus during a complicated mental task
 - especially those with attention-deficit/hyperactivity disorder (ADHD)—fidgeted more when a task required them to store and process information rather than just hold it.

Dump the chair?

- Engages core muscles
- Less impulsivity
- Increase focus

<i>Height</i>	<i>Recommended ball size</i>
Under 4'8"	45 cm ball
4'8" to 5'3"	55 cm ball
5'4" to 5'10"	65 cm ball
5'10" to 6'4"	75cm ball

For kids 5 years and younger, always use a 45 cm ball.
(Exercise Balls for Dummies)



Fidget Footrests

- Standing desks can help students who find sitting still difficult
- Use of dynamic footrests can help release energy and improve focus



Mounts



RAM



RAM



ErgoMart



(RJ Cooper Magic Arm)

Mobile devices

Can also contribute to poor posture and repetitive motion injuries

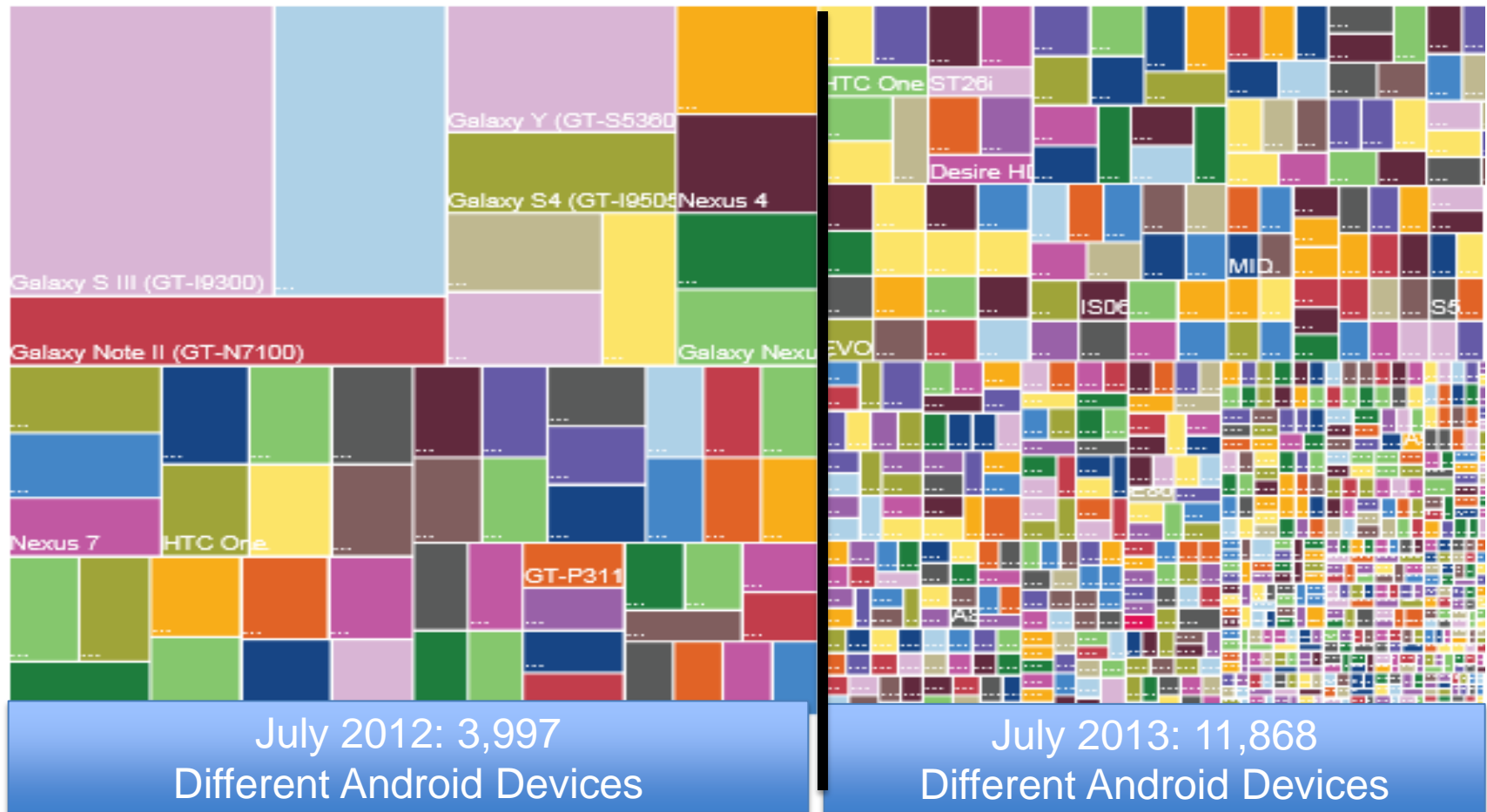
Neck strain, nerve compression



Comparing Tablets

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

Android Device Fragmentation



Future

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



- *Martha Rust*

PROUST™

Know the ones you love.


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

YOUR FIRST QUESTION

Where did you grow
up?

 Not inspired?

Share your answer

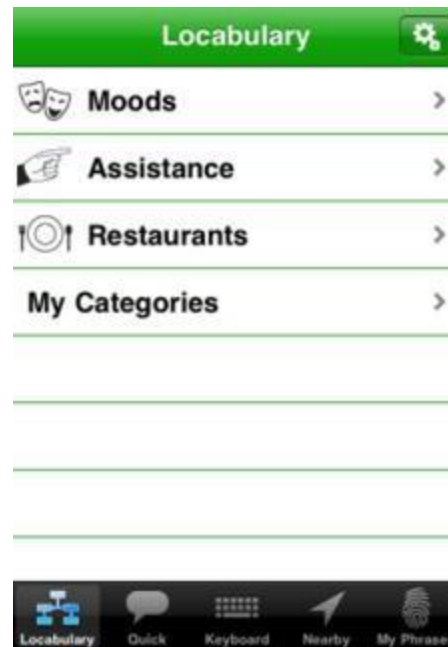
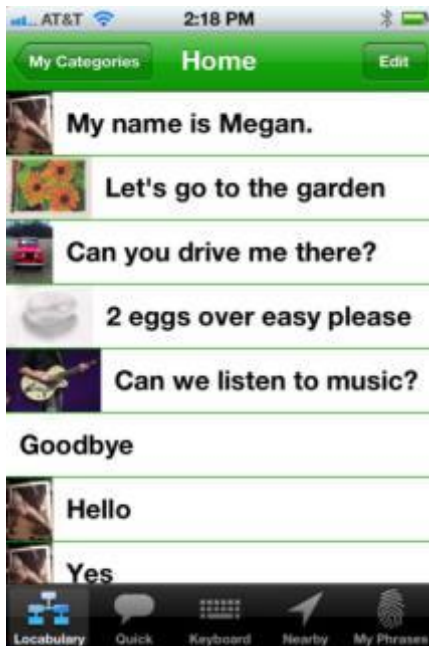
Sign Up

or



Connect

Locabulary



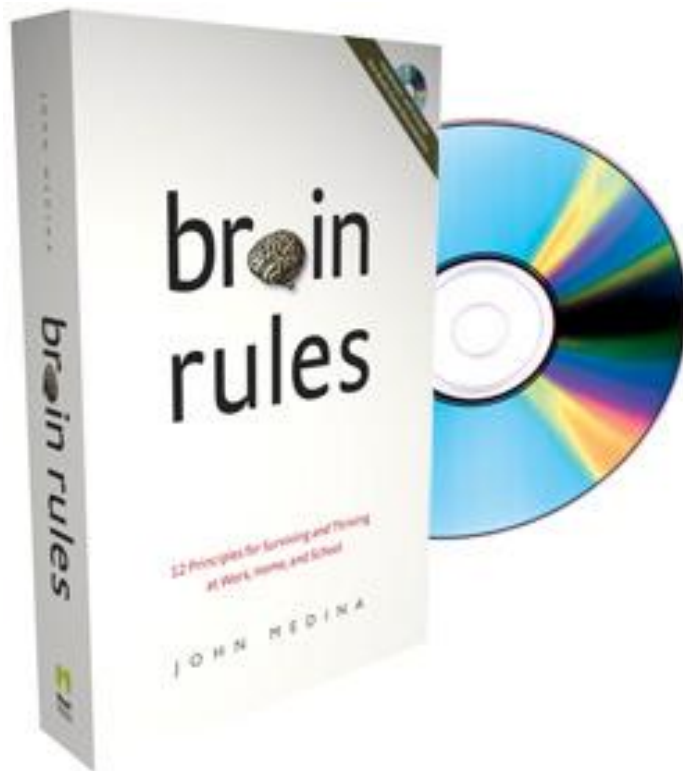
- Uses GPS to track user location and suggests appropriate vocabulary based on location
 - ie: McDonald's; starbucks
- A keyboard to type for text-to-speech
- User can tag their own locations and create vocabulary for each location
- Lite version Free; Pro version \$130

Neuroplasticity Research

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.

12 Brain Rules – John Medina Ph.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

NEW YORK TIMES BESTSELLER
NORMAN DOIDGE, M.D.

As Featured on PBS's *The Brain Fitness Program*



THE
BRAIN
THAT CHANGES
ITSELF

Stories of Personal Triumph from
the Frontiers of Brain Science

"The power of positive thinking finally gains scientific credibility. Mind-bending, miracle-making, reality-busting stuff . . . Straddles the gap between science and self-help." —*The New York Times*

NEW YORK TIMES BESTSELLER
NORMAN DOIDGE, M.D.

As Featured on PBS's *The Brain Fitness Program*

THE NEW YORK TIMES AND INTERNATIONAL

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."

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

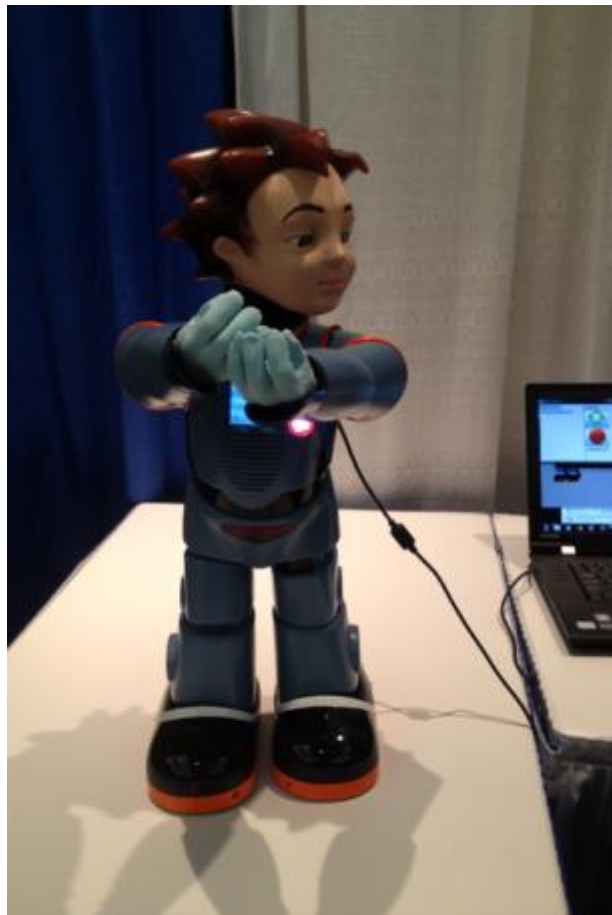


"Exploring New Ideas with Advanced Social Robotics"

— an extension of humankind. RoboKind.



ROBOKIND™
ADVANCED SOCIAL ROBOTICS



MICROPHONE ARRAY (#)

NUMBERED 8 TOTAL
• 1 on back
• 1 internal

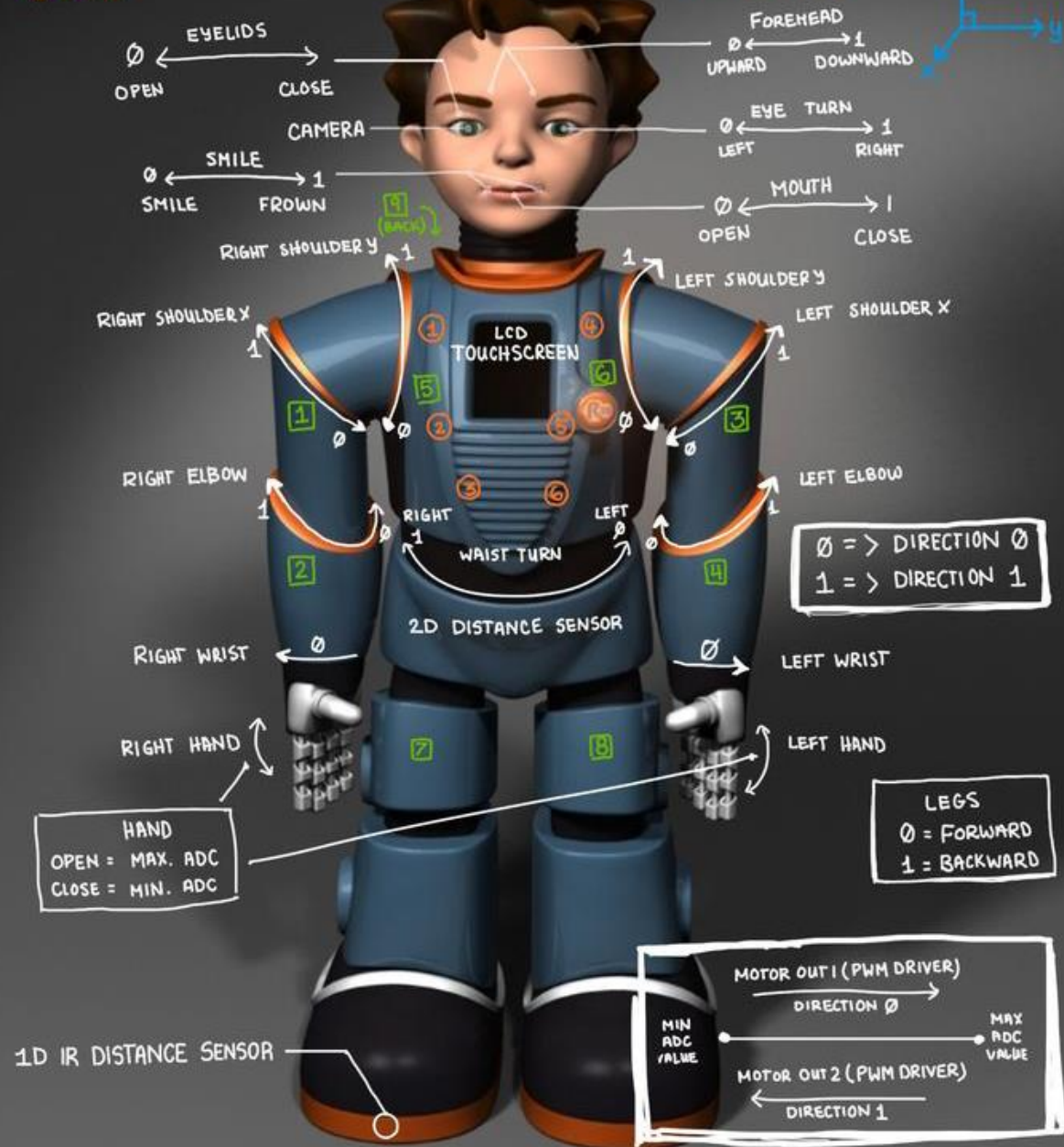
TOUCHZONES (##)

NUMBERED 9 TOTAL

3-AXIS ACCELEROMETER

3-AXIS GYRO

3-AXIS COMPASS

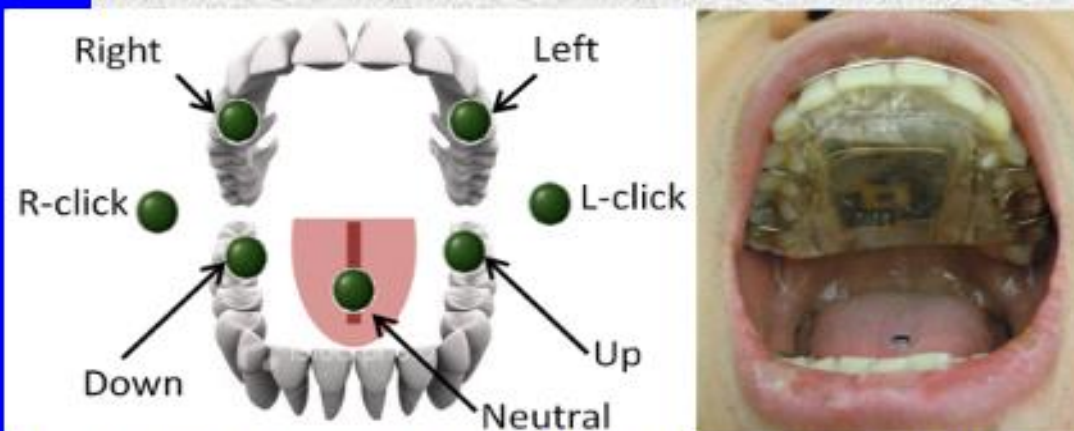
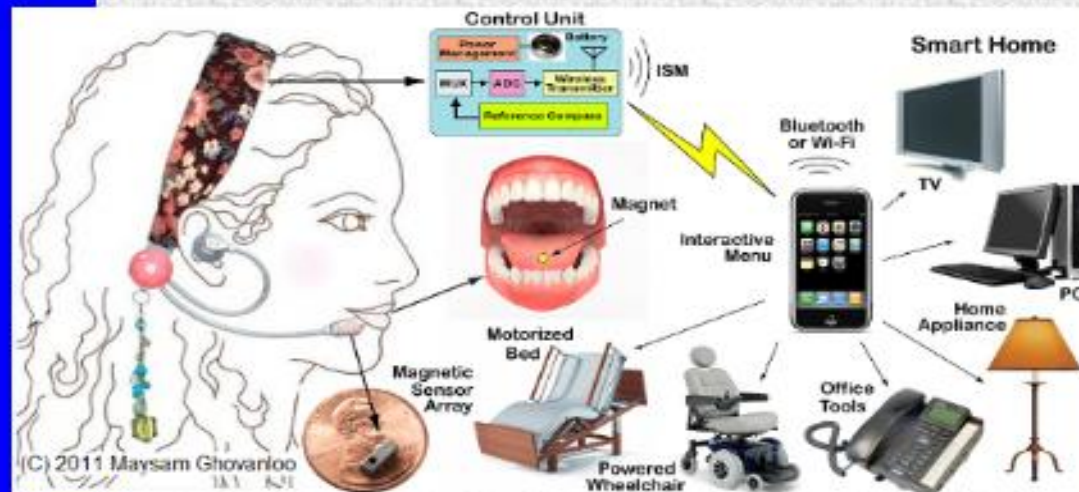


Meet NAO!





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.

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da Vinci
AWARDS

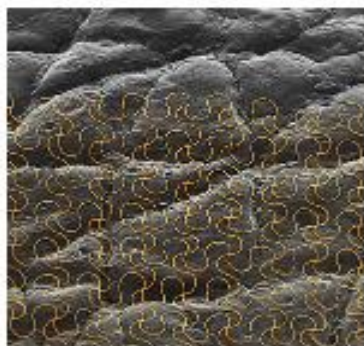
2010 FINALIST



Electronic Sensors Printed Directly on the Skin

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

By Mike Orcutt on March 13, 2013



Electronic tattoo. The image shows a colored micrograph of an ultrathin mesh electronic system mounted on a skin replica.

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.



Skin signals. This device, applied directly to the skin, can record useful medical information.

"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 flake 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 health-care providers.

More top sites than one else in the world.
ablnet as of 10/25/13

WHY IT MATTERS

Wearable electronic devices could be useful for a range of medical applications.

IBM System x Express servers
From \$From \$1,849 or \$55/mo¹

[Learn more >](#)

Ten days with Google Glass

By [Will Shanklin](#)
December 23, 2013

14 Comments
7 Pictures

www.lenscrafters.com

Official Site. Visit Us Now & Save!
Designer Eyewear, Lenses, &
More.

36

Like

54

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22

g+1



4

Pin it

8

Share

submit
reddit

Email



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 comp 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-

Review
smartwatch

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

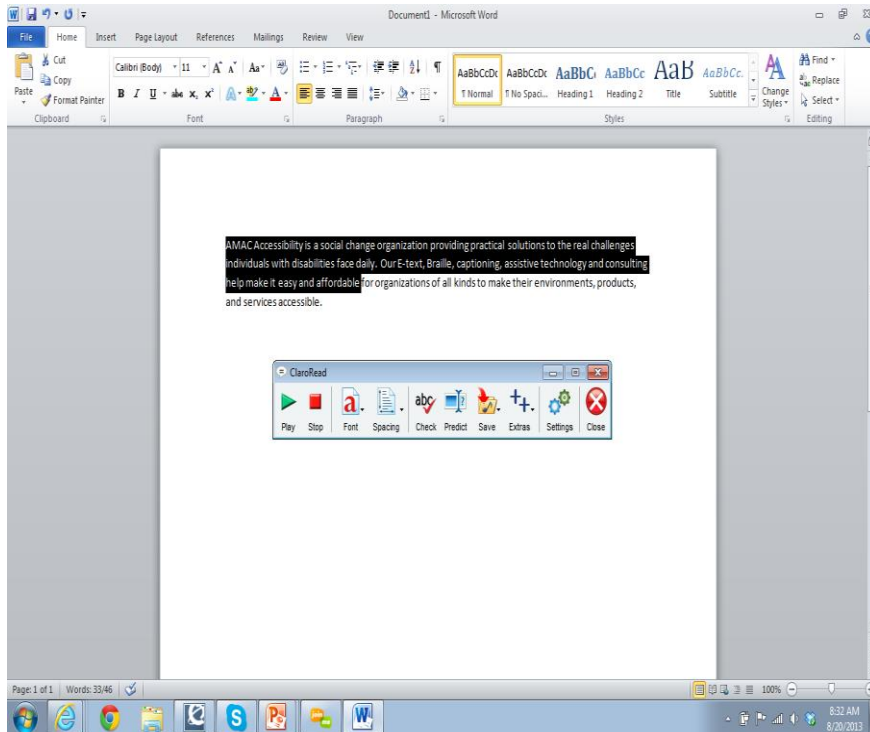




Screen Reading Software

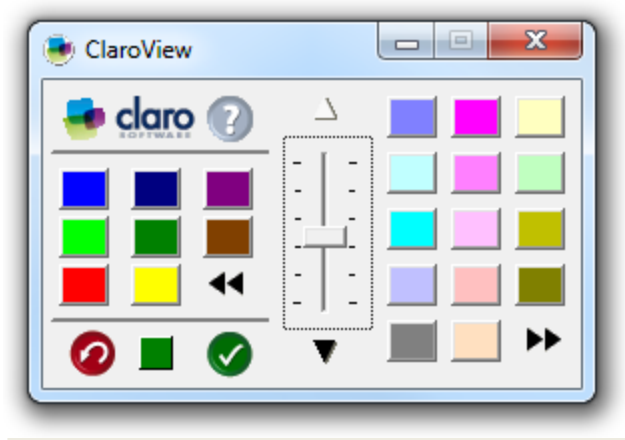
Claro Read is one example

- 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

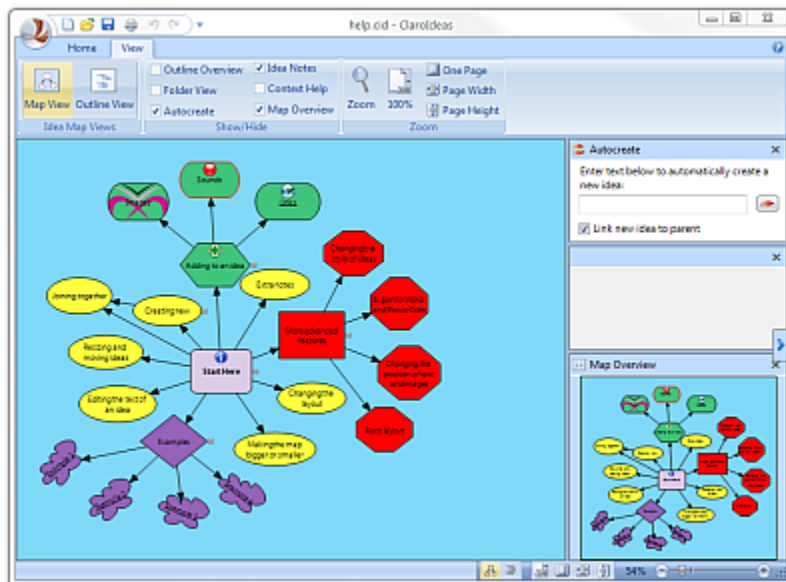
- Organize notes from various files

ClaroIdeas

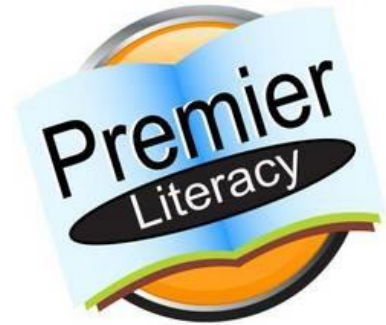
- Visual graphic organizer

Screen ruler

- Highlights and magnifies screen in a horizontal band



- 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

ReaderTalking PointerSumm ITDynamic ReaderEN DictWrite NowThesaurusText To MP3Web GrabberPremier ToolsVoicesOptionsHelpClose

PDF Equalizer - Frankenstein

FileEditViewHighlightReadOutputHelp

HomeNotesReadingHighlightingUtilitiesHelp

OpenSaveFindImageTextPasteEN DictScanHighlightColorFirstPriorNextLastReadSelectedArrangeStopVoicesHelp

Frankenstein

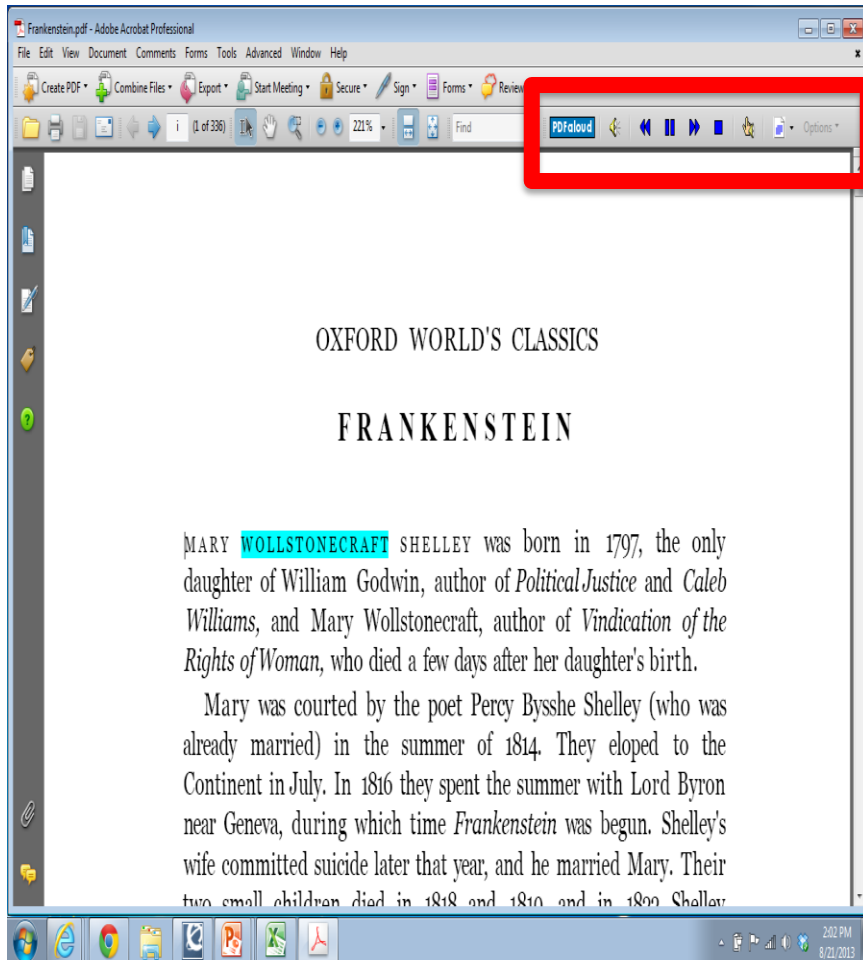
Zoom: 303ZoomEnter Page #: 44Go to PagePDF Page #Book Page #

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

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PDFAloud



- Built in toolbar that fits with Adobe Reader 10 (or earlier) or Adobe Acrobat
- Highlights text as it reads
- Does *NOT* work in Acrobat 11

Atomic Resources

Atomic Learning Tutorials

AMAC membership also provides you with access to Atomic Learning videos. Go to **Atomic Learning** to access video tutorials on many widely used applications and devices such as Microsoft Office and iOS for iPad and iPhone.



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



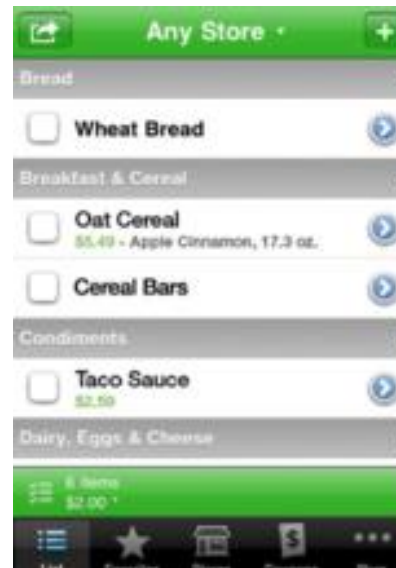
- Keep track of medication
- Reminders
- Refill Reminders
- Healthcare Provider Profiles
- Insurance Information
- Allergies
- Works across Platforms
- Free
- www.mymedschedule.com



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



SkyGrid



- Personalize news events by categories
- Simple interface
- Free
- www.skygrid.com



Apps for Social Networking/Staying Connected

iMovie



iMovie

Filmmaking doesn't get more indie than this.

**Mini-masterpieces.
Made on location.**

Make beautiful HD movies anywhere with iMovie, the fun, feature-rich video editing app that's designed for iPhone 4. Create a video postcard of your day at the beach and publish it to the web without leaving your spot on the sand. Or make a movie of your child's birthday party and send it to your parents while the party is in full swing. You can start several projects on your iPhone 4 and finish them whenever you want and wherever you are.



iMovie

Get the iMovie app and start editing movies on your iPhone 4. Coming soon to the App Store for \$4.99.



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

Apps for Fitness

Sleep Cycle

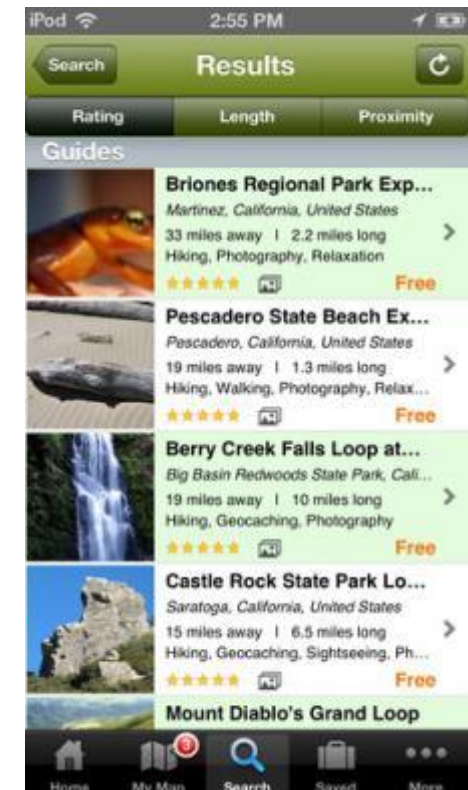
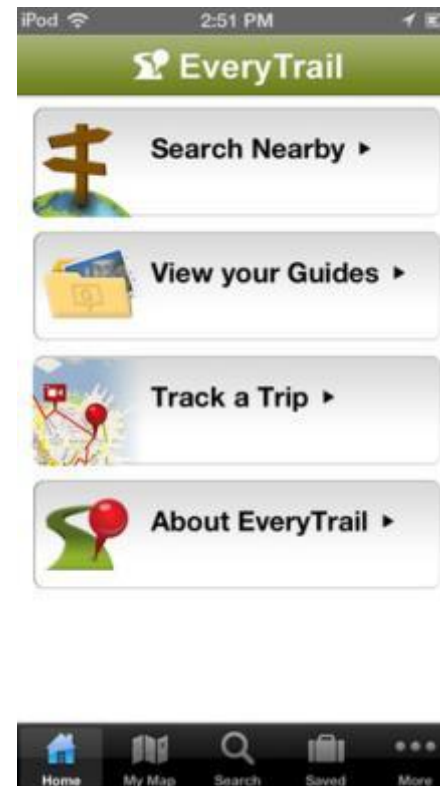


- Tracks your sleep patterns
- Uses iPhone accelerometer to track how often you move at night
- Set an alarm range
- Woken up gradually when you are in like sleep
- Feel refreshed and energized
- \$2.99

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

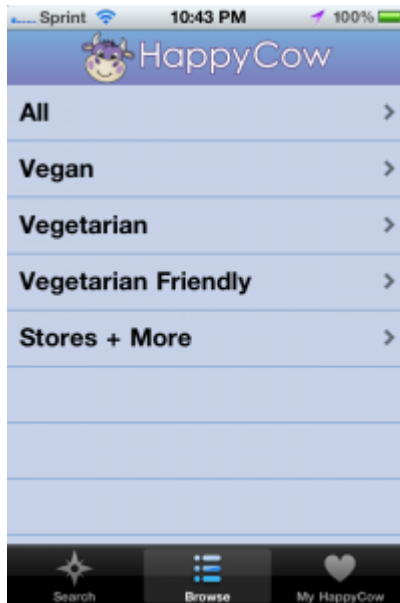
Fooducate



- 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



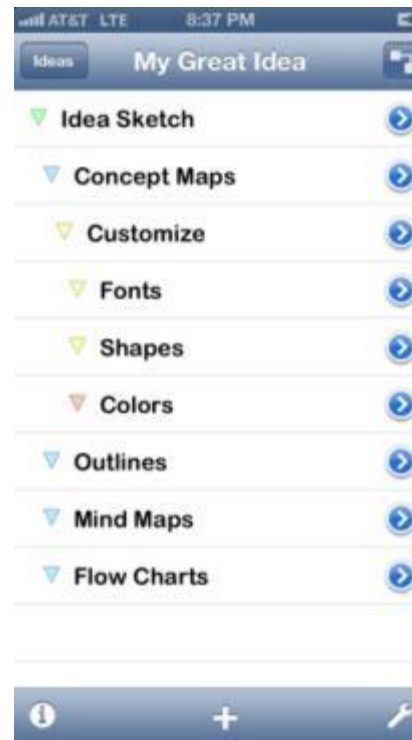
- Interactive map to locate vegan, vegetarian and health food stores
- Provides directions, phone numbers, & website
- Share information via Facebook, Twitter, Email, or SMS
- Upload photos
- \$2.99

Apps for Organizing

Idea Sketch



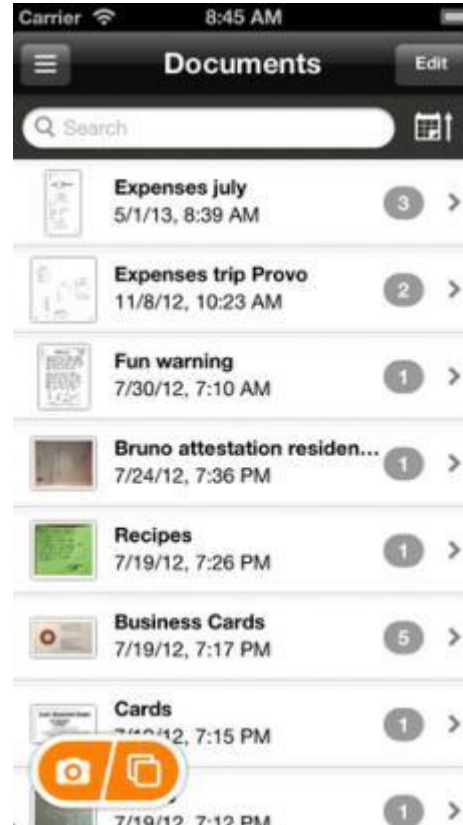
- Mind and concept mapping
- Create flow charts
- Brainstorm ideas
- Convert flowchart to text outline and vice versa
- Free



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

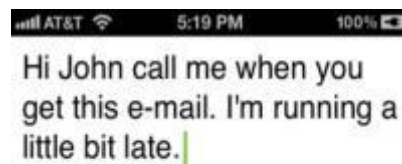
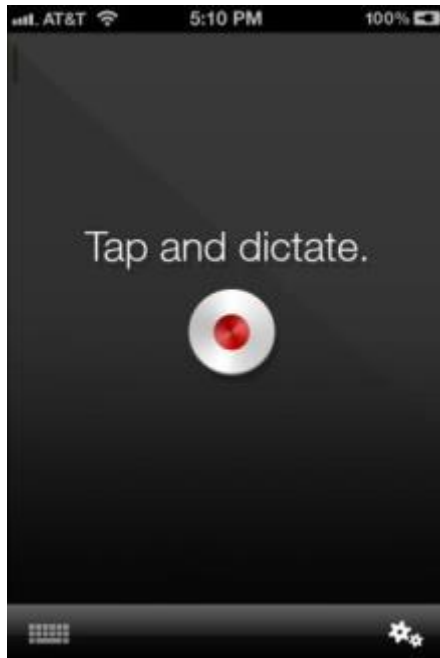


- Use Bump™ to share contact information and photos by simply bumping two phones together.
- Just open Bump, hold your phones, and gently bump your hands together
- **Free!**

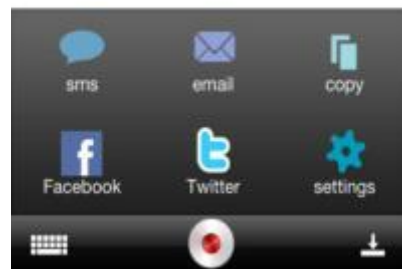
[Demo](#)

Apps for Writing

Dragon Dictation

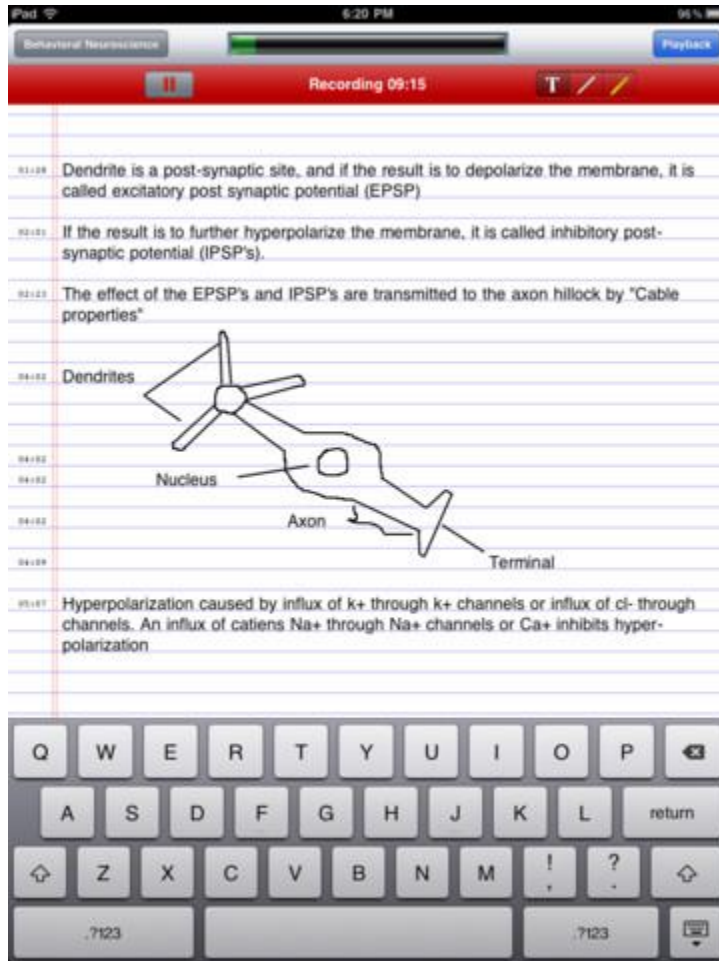


Hi John call me when you get this e-mail. I'm running a little bit late.



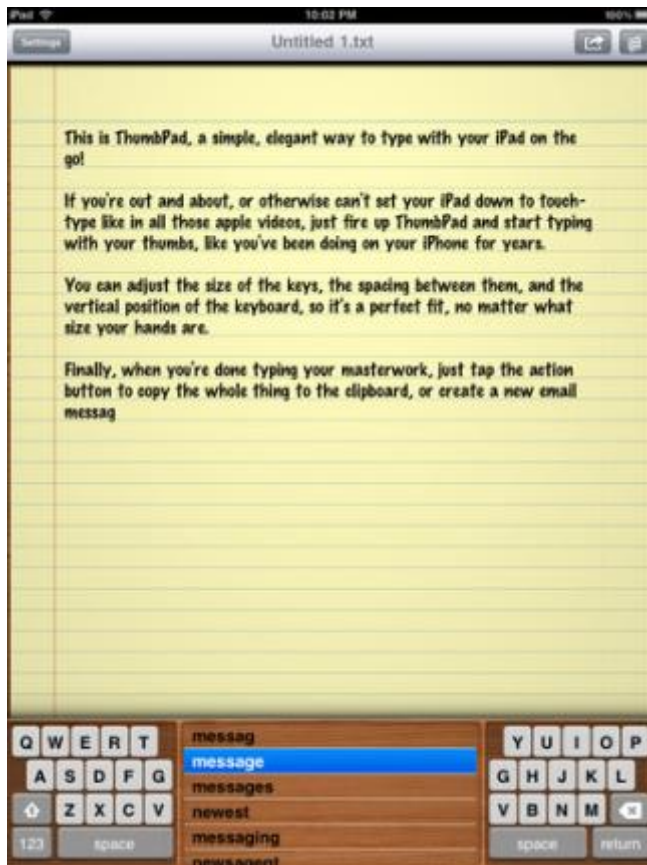
- Voice Recognition
- Free
- Dictate notes, emails, Twitter, and Facebook
- Supports many languages
- Cut, Copy, Paste
- Android
 - Dragon Go!
 - Dragon Hands Free Assistant

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



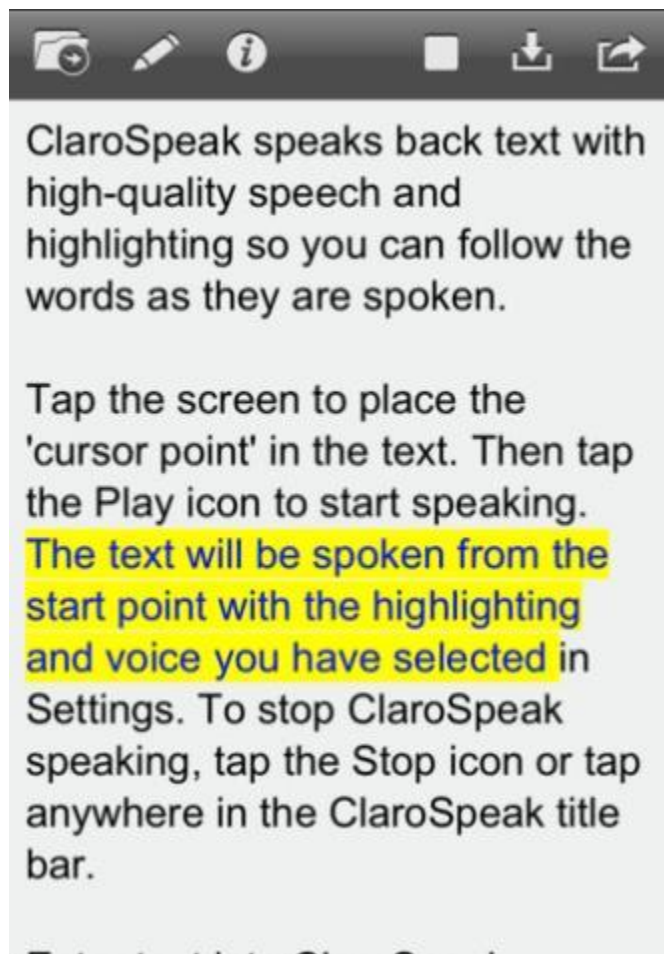
- Type with your thumbs on the iPad as you do on the iPhone
- Adjustable keyboard
- Customizable
 - Adjust key width
 - Height
 - Spacing
- \$3.99

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

Apps for Organization/Memory

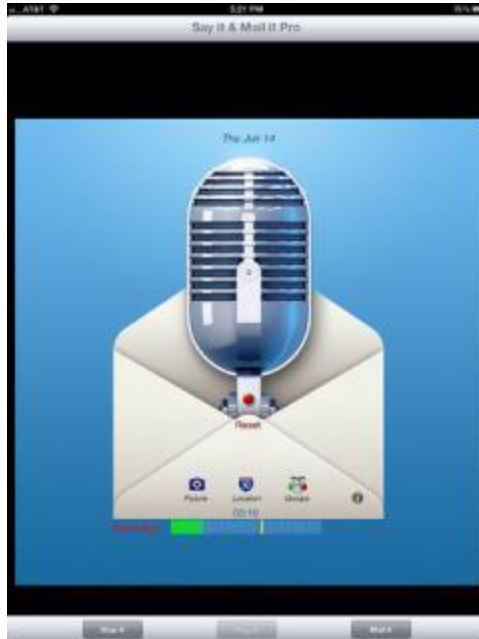
Cozi

- 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.



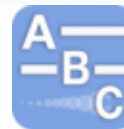
Apps for Writing and Reading

Say it & Mail it Pro



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

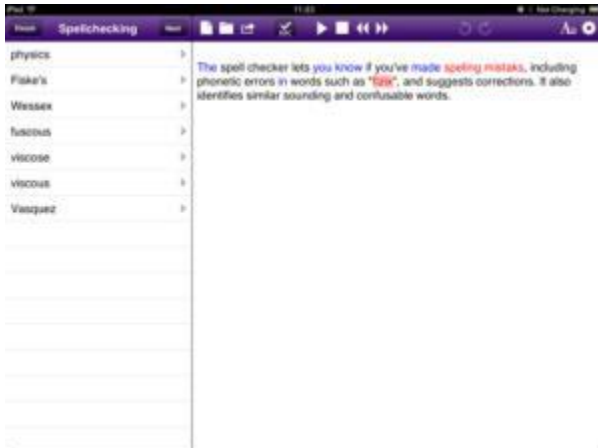
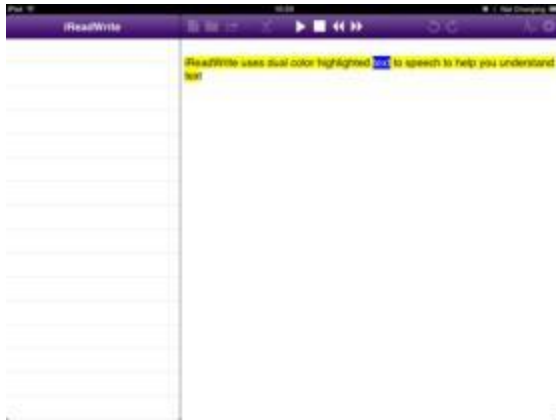
Brevity



- 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 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




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 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!

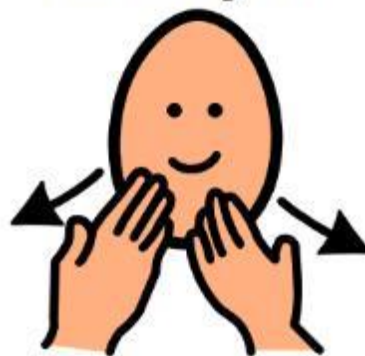
What Technology Trends do see?



**Our Question to You:
What have You Learned today?**

Thank You!

thank you





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