Tracking Trends and Transferring Knowledge

Carolyn Phillips

With contributions from Martha Rust, Liz Persaud & Ben Satterfield

www.gatfl.gatech.edu

UDL & AT Conference
Griffin RESA
February 2014

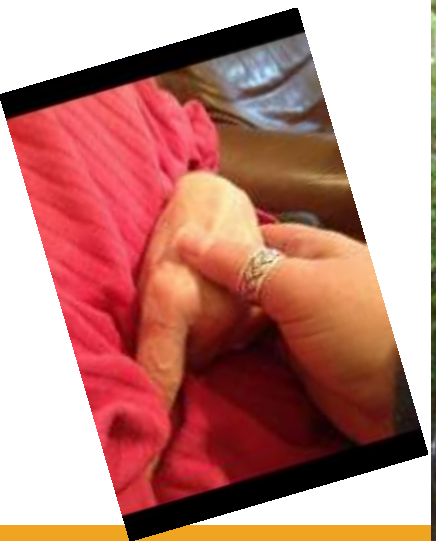
Agenda

- Welcome to the Assistive Technology revolution! The world around us is evolving at an astounding rate. Assistive Technology developments have been foundational in this evolution and a catalyst producing positive life-changing results for individuals with disabilities. This talk will present what's new in AT and in the AT community as we explore where we were, where we are, and perhaps, where we are going. Possible solutions to expedite knowledge transfer from research journals to your clients whether they are school, at home, at work, or in the community will also be discussed.

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

Why Am I Here Today?

- Master Our Skills!
- Expand Our Knowled
- Build Stronger Schoo



AMAC
Accessibility for All

Hope begins in the dark, the stubborn hope that if you just show up and try to do the right thing, the dawn will come.

~Anne Lamott

TOOLS for LIFE
Georgia's Assistive Technology Act Program

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

Tools for Life Network

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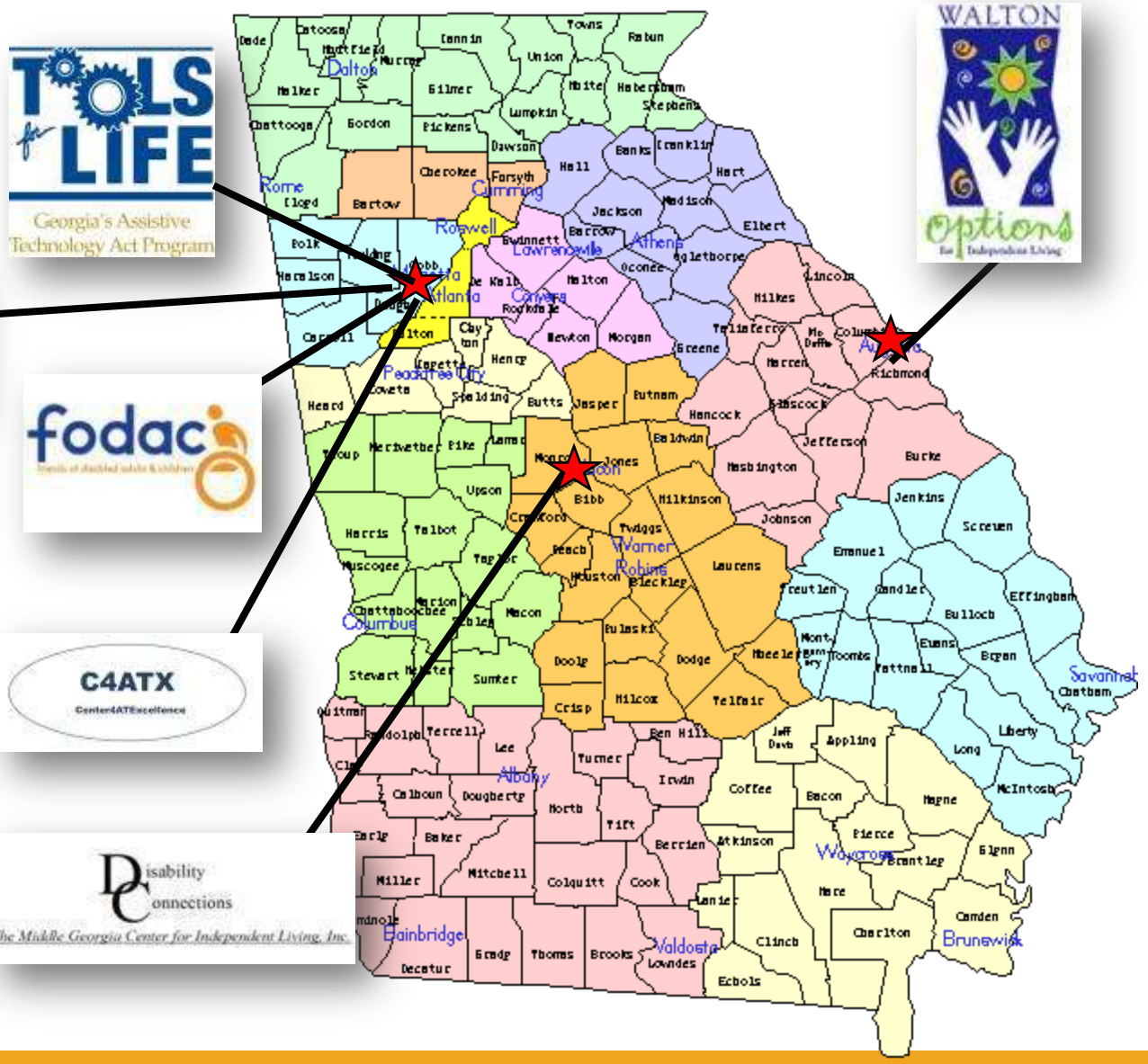
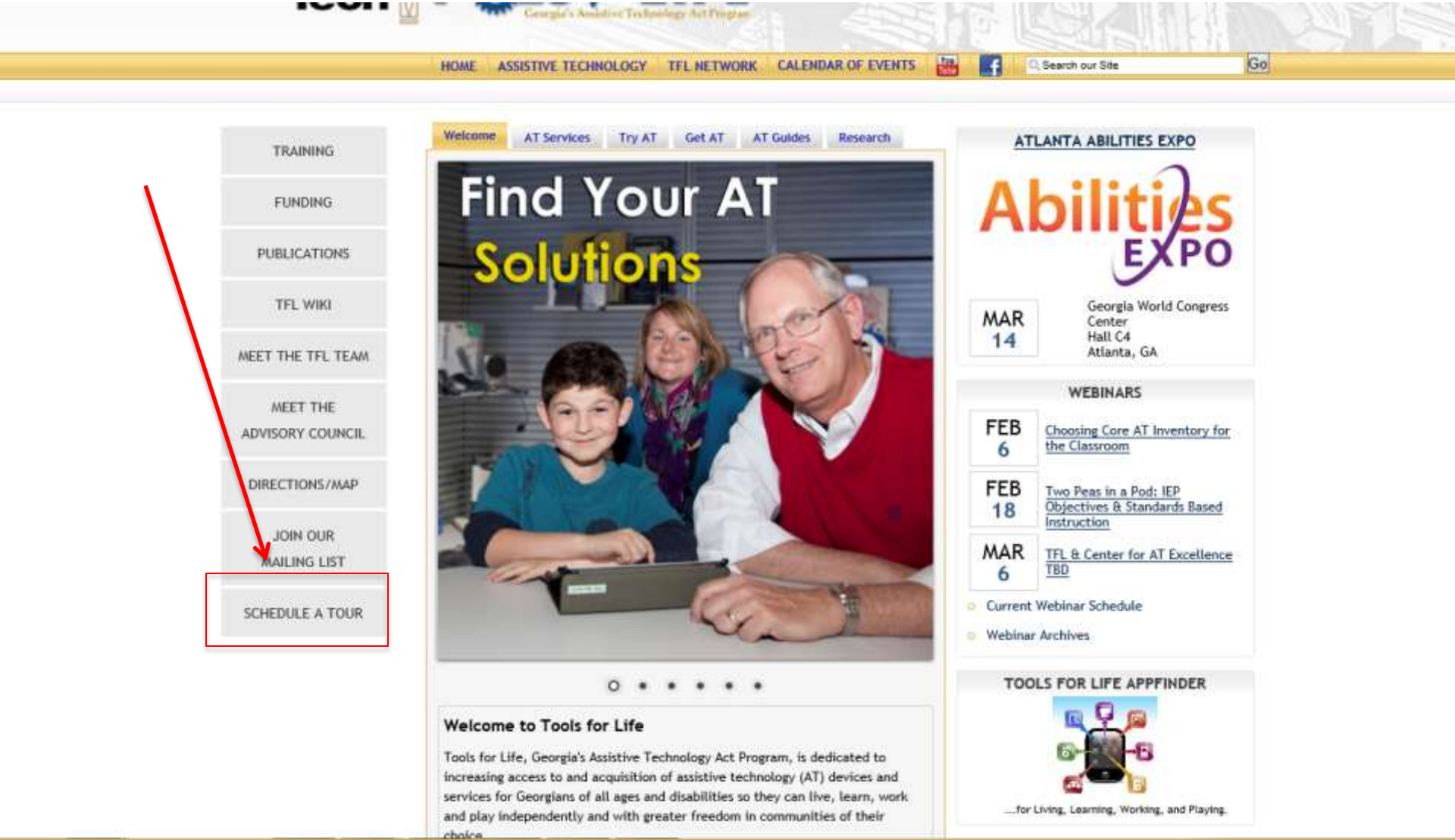
Accessibility for All



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

Come Visit Us!



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, ... increasing access to and acquisition of assistive technology (AT) de... services for Georgians of all ages and disabilities so they can live, lea... 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

...Learning, ...Playing.

AT ONLINE EXCHANGE

gTRADE

Normal mode: You can dictate and use voice commands
Profile Tools Vocabulary Modes Audio Help

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

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

Looking Back to See Forward…

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

By Chris Morran

Emerging Trends

Knowledge transfer is the practical action of transferring knowledge from one organization to another. Like knowledge management, knowledge transfer seeks to organize, create, capture or distribute knowledge and ensure its availability for future users.

TIP: Universities & Colleges are becoming more agile and actively seeking avenues for Knowledge Transfer.

Wikipedia

Assistive Technology Research: 20 Key Articles

Dave Edyburn, Ph.D. (edyburn@uwm.edu)

University of Wisconsin – Milwaukee

January 30, 2014, ATIA, Orlando, FL

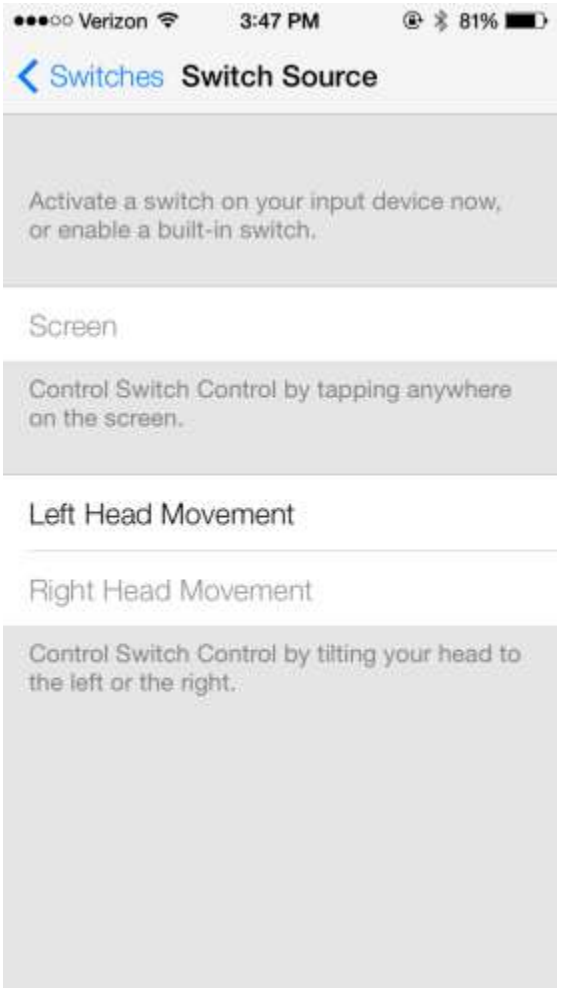
Description

Educators, researchers, and developers are increasingly expected to utilize evidence-based practices in the context of interventions used with individuals with disabilities. The purpose of this presentation is to provide an overview of 20 key articles that could form the basis of a reading list or primer on the effectiveness of assistive technology. As an outcome of this presentation, it is expected that participants will gain insight into model research studies that they can use when designing their own assistive technology research. Perhaps more importantly, it is anticipated that the primer will provide the basis of a collegial study group so that organizations can enhance their individual and collective understanding of assistive technology interventions that are evidence-based.

AMAC
Accessibility for All

New iOS 7 Features

- September 2013
- Automatically turn on captioning and subtitles
- Fingerprint Security
  - iPhone 5
- Switch Source under Accessibility
  - Allows user to control devices by head movement



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

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

www.bluebugle.org updated by TFL 2013

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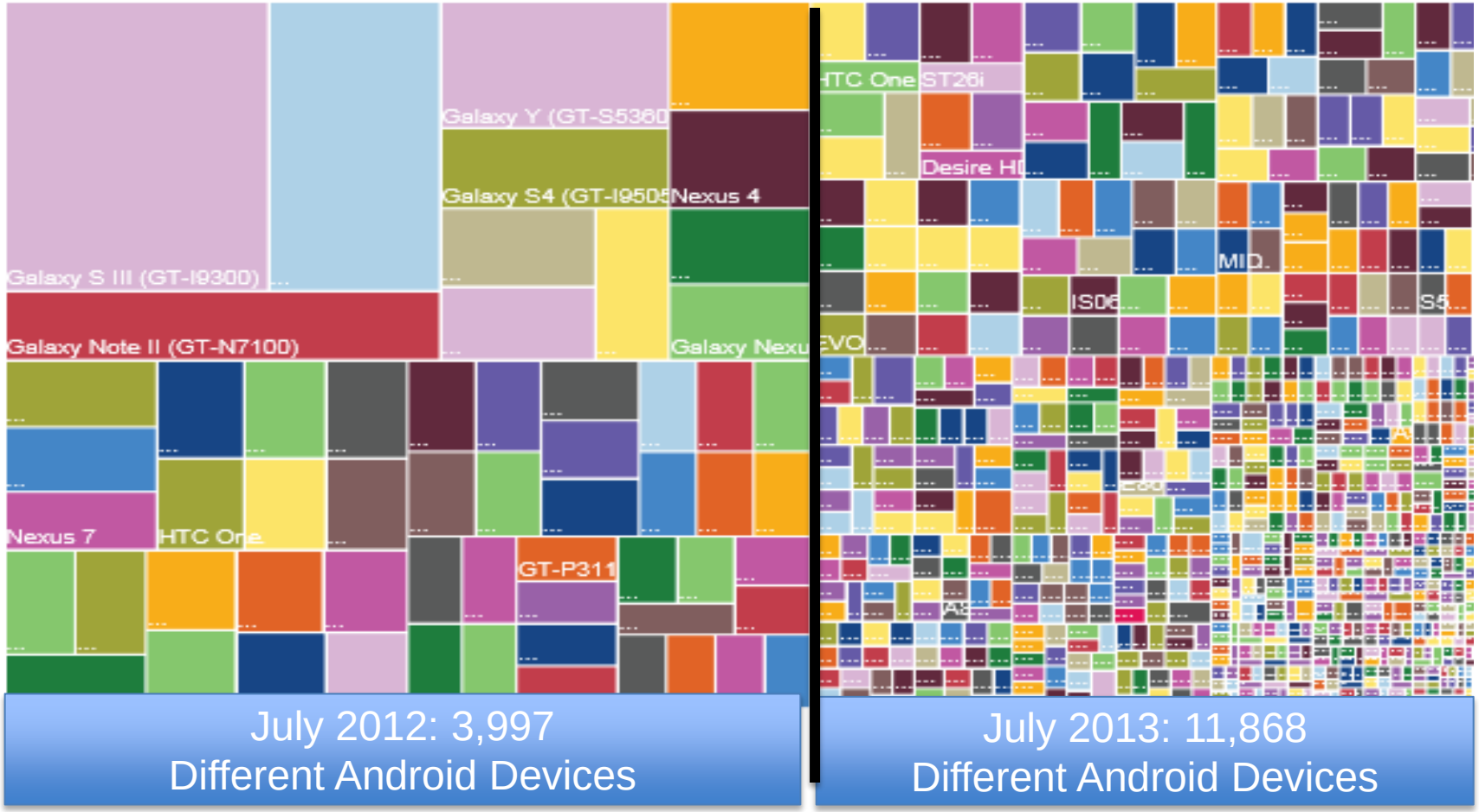
Android Device Fragmentation



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

Android Version History

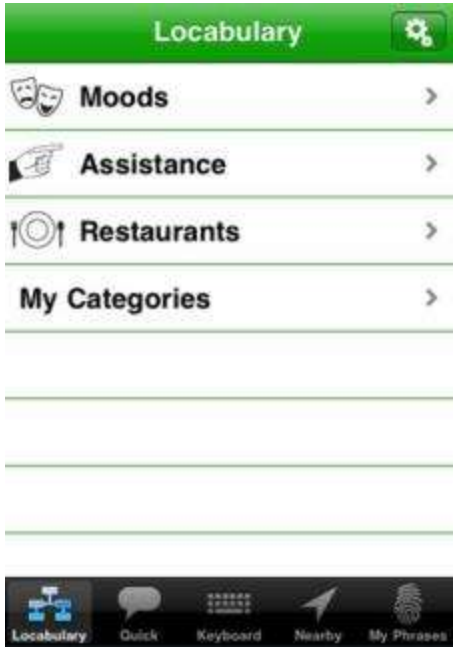
Android 1.5 Cupcake
Android 1.6 Doughnut
Android 2.0 Éclair
Android 2.3 Gingerbread
Android 3.0 Honeycomb
Android 4.0 Ice Cream Sandwich
Android 4.1 Jelly Bean

Android 5.0 Key Lime Pie ???

Ben Satterfield

AMAC
Accessibility for All

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

Projects

Research Projects

Development Projects

Training Projects

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App Factory (D1)

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

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

A complementary objective of this project is development of a practical model for consumer participation in the process of app development. This process engages the community of people with disabilities throughout the process of envisioning, designing, testing, refining, and disseminating applications.

Latest News

Wireless RERC Researchers Present at CDC Grand Rounds

Last Call for 2013-14 App Developers

Technology Transitions Policy Task Force Workshop

More News

Upcoming Events

September 30, 2013 - 7:00am

STEM Diversity Career Expo

Future

- Evening out the playing field
- More schools Bring Your Own Technology
- The Future is Contextual
  - GPS apps
  - Ads on Internet
  - Smart watches
  - Social Media
    - Proust.com

- *Martha Rust*

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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

AAC-RERC
SPREAD THE WORD

The RERC on Communication Enhancement

Home
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Presentations
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Upcoming Events

There are currently no upcoming events.

The AAC-RERC is a Rehabilitation Engineering Research Center that functions as a collaborative research group dedicated to the development of effective AAC technology. Augmentative and alternative communication (AAC) refers to ways (other than speech) that are used to send a message from one person to another.

Recent activities ...

State of the Science Conference in AAC: AAC-RERC Final Report

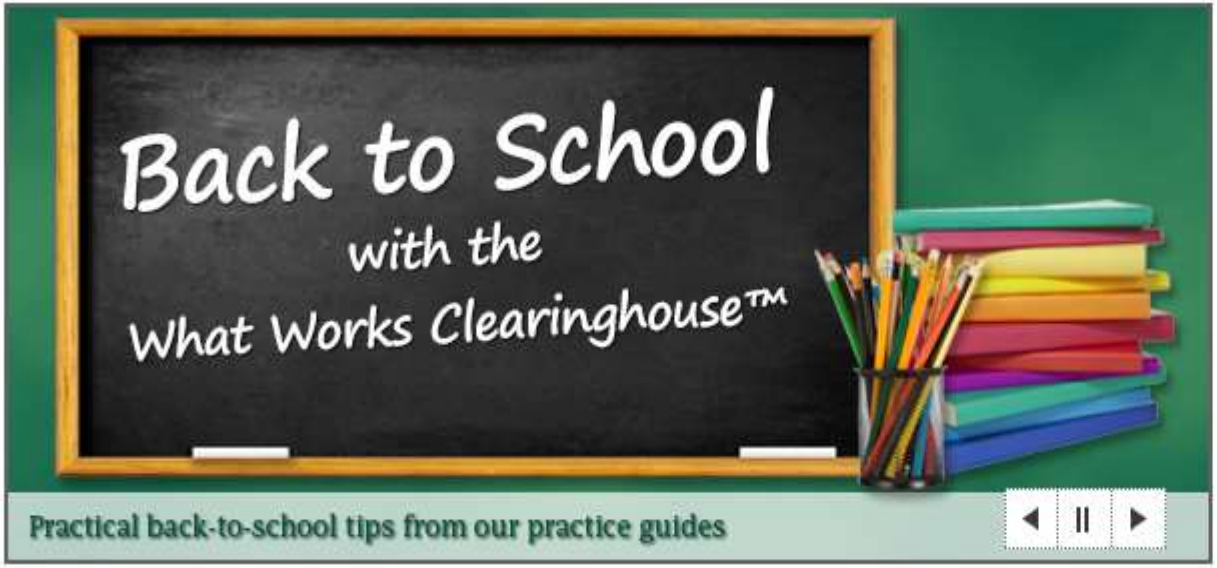
The AAC-RERC partners prepared a comprehensive report on the final outcomes of the State of the Science Conference held in Baltimore, MD on in conjunction with the RESNA conference. Copies of the report are available for download.

State of the Science Conference in AAC: Presentations

Melanie Fried-Oken, Janice Light, Susan Fager, and Jeff Higginbotham presented at the State of the Science Conference hosted by the AAC-RERC at the RESNA conference. The presentations are available as webcasts and on YouTube.

Supporting Communication for Adults with Acute and Chronic Aphasia

This new text, edited by Nina Simmons-Mackie, Julia M. King, and David R. Beukelman, describes how AAC and



Evidence for What Works in Education

We review the research on the different *programs, products, practices,* and *policies* in education.

Then, by focusing on the results from *high-quality research*, we try to answer the question **"What works in education?"**

Our goal is to provide educators with the information they need to make **evidence-based decisions.**

Publications & Reviews

Get started with WWC products:

- **Practice guides** help educators address classroom challenges.
- **Intervention reports** guide evidence-based decisions.
- **Single study reviews** examine research quality.
- **Quick reviews** give the WWC's assessment of recent education research.
- The **studies database** contains all

Find What Works!

Based on the research evidence, find what works to...

- improve literacy skills in 3rd graders,
- increase math achievement in preschoolers,

What's New?

New York City's Schoolwide Performance Bonus Program
Sep 17

WWC Reviews Study of First Step to Success Program
Sep 10

Impacts of Comprehensive Teacher Induction are Focus of Well-Implemented Study
Sep 4

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Science News

... from universities, journals, and other research organizations

E-Readers Can Make Reading Easier for Those With Dyslexia

Sep. 18, 2013 — As e-readers grow in popularity as convenient alternatives to traditional books, researchers at the Smithsonian have found that convenience may not be their only benefit. The team discovered that when e-readers are set up to display only a few words per line, some people with dyslexia can read more easily, quickly and with greater comprehension. Their findings are published in the Sept. 18 issue of the journal *PLOS ONE*.

In the paper condition students read passages from the Gates-MacGinitie Reading Tests and answered multiple choice questions as shown. In the iPod condition the reading passage was displayed on the iPod (scrolled vertically using a finger on the

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An element in many cases of dyslexia is called a visual attention deficit. It is marked by an inability to concentrate on letters within words or words within lines of text. Another element is known as visual crowding--the failure to recognize

Interes
read Sc
Just In:
Triclosar
Social
Follow S
and Goo
Face
Recomm
and Goo
Like
Other so

ScienceDaily®
Your source for the latest research news

✓ Ad muted. Undo
We'll do our best to show you more relevant ads in the future.
Help us show you better ads by updating your ads settings.
Google

Science News

... from universities, journals, and other research organizations

How Emotions Are Mapped in the Body

Dec. 31, 2013 — Researchers found that the most common emotions trigger strong bodily sensations, and the bodily maps of these sensations were topographically different for different emotions. The sensation patterns were, however, consistent across different West European and East Asian cultures, highlighting that emotions and their corresponding bodily sensation patterns have a biological basis.

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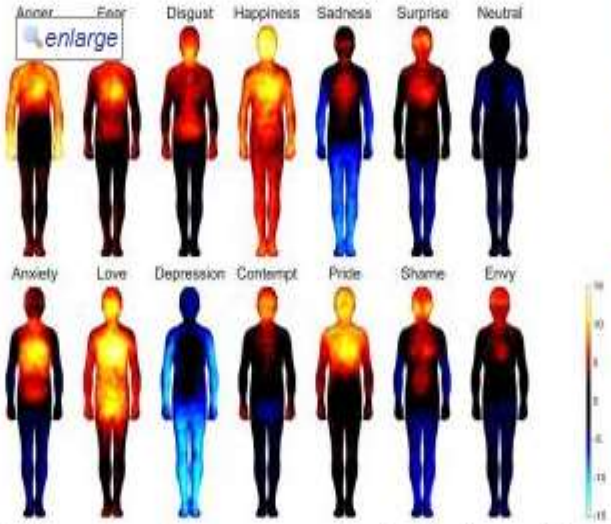
+1 64
Share 28

"Emotions adjust not only our mental, but also our bodily states. This way the prepare us to react swiftly to the dangers, but also to the opportunities such as pleasurable social interactions present in the environment. Awareness of the corresponding bodily changes may subsequently trigger the conscious emotional sensations, such as the feeling of happiness," tells assistant professor Lauri Nummenmaa from Aalto University.

"The findings have major implications for our understanding of the functions of emotions and their bodily basis. On the other



Different emotions are associated with discernible patterns of bodily sensations. (Credit: Image courtesy of Aalto University)

Related Topics

Mind & Brain
- Psychology
- Borderline Personality

Articles
- Emotional detachment

Coming Soon: The New ScienceDa
Preview our new website, featuring research news in an updated, stream with videos from news services arou

Just In:
Major Reductions in Marine Life Predi
more breaking

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Like 75k | Tweet 28.8K

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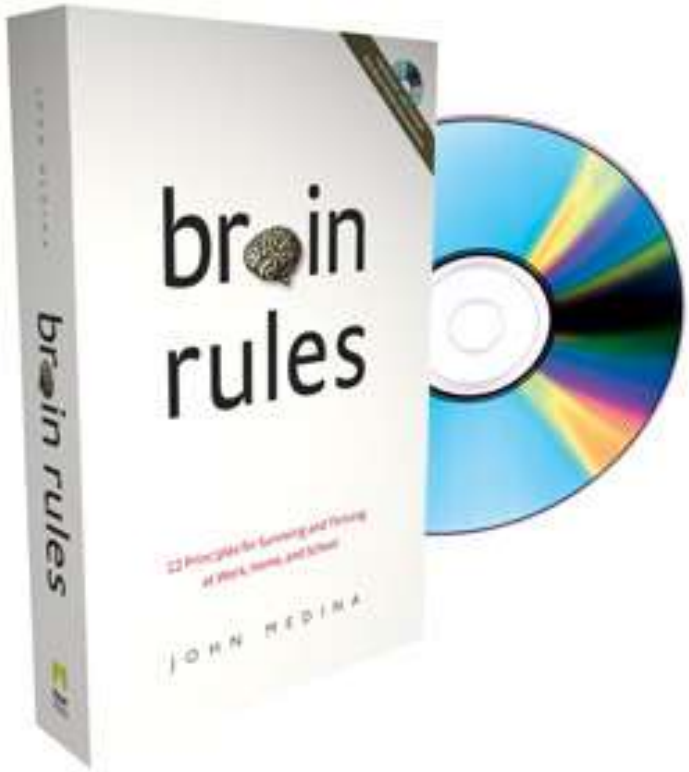
Try brain training tested

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."

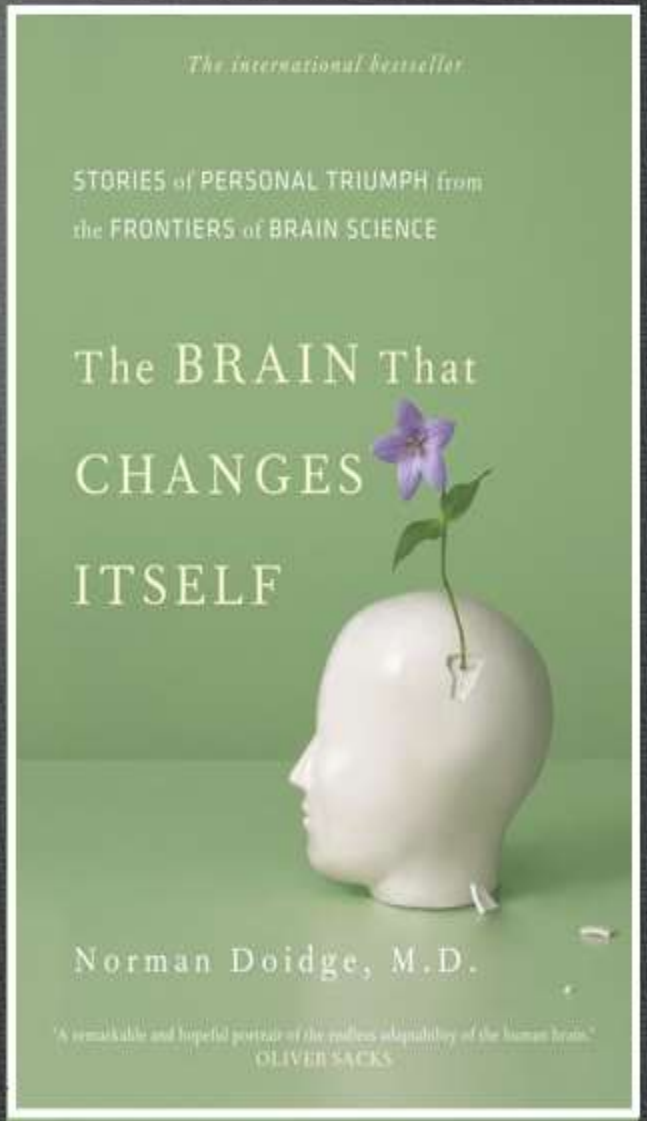
V.S. RAMACHANDRAN, MD, PHD:

"Superb. Brilliant. I devoured it."

ABOUT THE BOOK

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

Norman Doidge, MD, a psychiatrist and researcher, set out to investigate neuroplasticity and met both the brilliant scientists championing it and the people whose lives they've transformed.



STORIES of PERSONAL TRIUMPH from the FRONTIERS OF BRAIN SCIENCE

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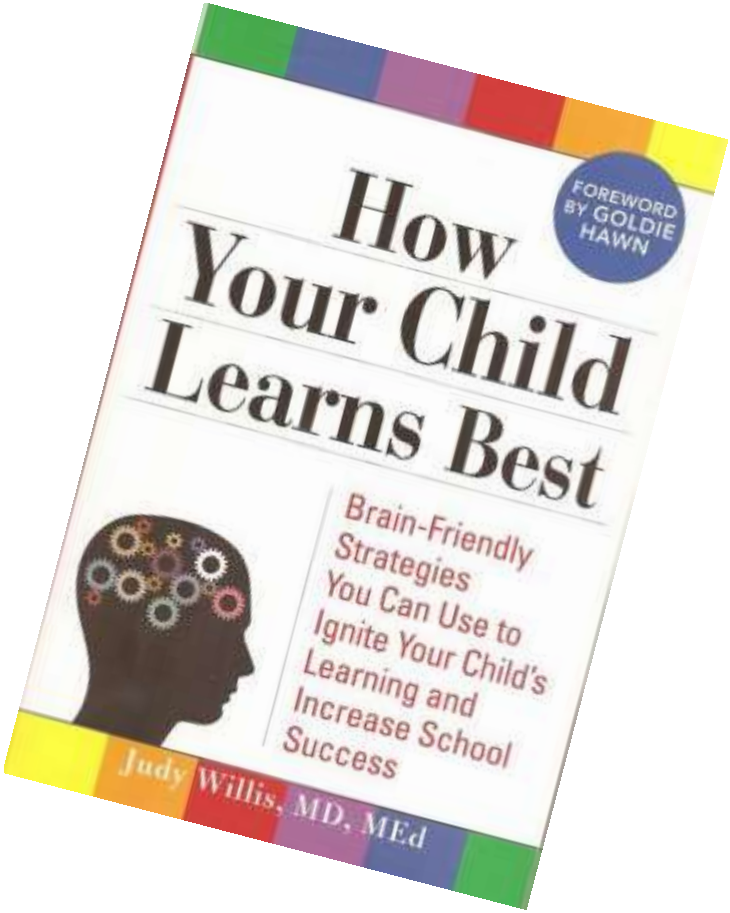
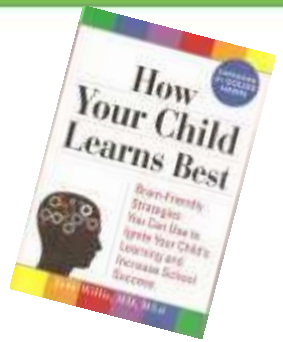
Accessibility for All

How Your Child Learns Best



Neuroplasticity



When the action is repeated, the more dendrites sprout to connect new memories to old ones, stronger the connections become, the more efficient the brain becomes at retrieving that memory or action

Georgia Institute of Technology

Human Factors & Aging Laboratory

We are able to implement various methodologies to address many types of research questions - Tracy Mitzner

Overview | Projects | Opportunities | Publications | People | Photos | News | Links | Contact Us

Points of Excellence

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

Resources

Senior-to-Senior Brochure

Sponsors

Overview of the Human Factors and Aging Laboratory

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Participant Information (P

Older Adults

Younger Adult

News

Science20 featur
on assistive robo

Georgia Institute of Technology

Human Factors & Aging Laboratory

We maintain a basic theoretical grounding while solving applied problems. - Andrew Mayer, Alumnus.

Projects

- Healthcare
  - Keeping Older Adults Healthy in Senior Living Communities
  - Understanding Use Errors for Medical Devices
  - Understanding Older Adults' Memory Issues in the Home
  - Gist Memory Project
  - Age-Related Differences in Fraction Comparison
  - Human Factors Issues of Home Health Care Providers
  - Pain Management Among Older Adults

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

Healthcare

Identifying Strategies to Keep Older Adults Healthy in Senior Living Communities

Contact Person: **Sara McBride**

Many older adults choose to make the transition into senior living communities, such as independent living or assisted living. We are interested in understanding the types of strategies used and decisions made by staff in these types of communities that are aimed at supporting residents' health. By identifying these processes, we may be able to improve training or design decision support systems that could facilitate portions of the decision making process.

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Participant Information (PDF):

Older Adults

Younger Adults

GTRI FACTS

Established 1934
21 locations in the US and Ireland
75 years of experience
1600+ people

QUICKLINKS

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Product Testing Network: Georgia Tech Launches HomeLab to Help Companies Evaluate In-Home Use of Emerging...

CASE STUDY

Product Testing Network: Georgia Tech Launches HomeLab to Help Companies Evaluate In-Home Use of Emerging Health Technologies

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

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

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

acceptance. Contexts for the discussion will include aging-in-place and health care.

Presentation 2: Human-Robot Interaction: The Potential to Support Successful Aging

Philips iCat

There is much potential for robots to support older adults in their goal of independent aging. However, for human-robot interactions to be successful, the robots must be designed with user needs in mind.

In the Human Factors and Aging Laboratory, Roger's lab is conducting research in the nascent field of older adult–robot interactions. In this presentation, Rogers will provide an overview of the needs, capabilities, preferences, and limitations of older adults. She will then discuss our current and planned research on the design of robots to support older adults and health care providers. Our focus is on understanding the interactions among user characteristics, robot characteristics, and the context of the interactions (e.g., task demands).

GATSBII-Georgia Tech Service Bot with Interactive Intelligence

Presentation 3: Aware Home Technology to Support Aging-in-Place

Aware Home at Georgia Tech

Imagine if your home were "aware" of your activities so that it might help you remember what it was you went into the kitchen for or whether the visitor at the front door is someone you know or even what the proper procedure is for performing a recently learned home medical procedure. An aware home is not from the world of science fiction—it is within the realm of science. Such technological developments have the potential to enable older adults to maintain their functional independence and to "age-in-place." They also have the potential to support families caring for children with developmental disabilities or individuals recovering from illness or injury. An innovative research program at Georgia Institute of Technology is focused on developing psychological and computer science to support home activities.

The presentation will include examples of health care technology, communication technology, and memory supports. These examples demonstrate the complexity of the issues involved in designing the computationally capable home of the future and provide direction for future research and development efforts.

Solutions

- Overview
- Products and Services
  - What is VGo?
  - How does it work?
  - How does it compare?
  - How much does it cost?
- Benefits
- Applications

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Products and Services

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

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

What is VGo?

How does it work?

How does it compare?

VGo Telepresence Robot

- Enables a person to replicate themself in a distant location and have the freedom to move around as if they were physically there
- Reduces travel costs
- School
- Hospital
- Work from home

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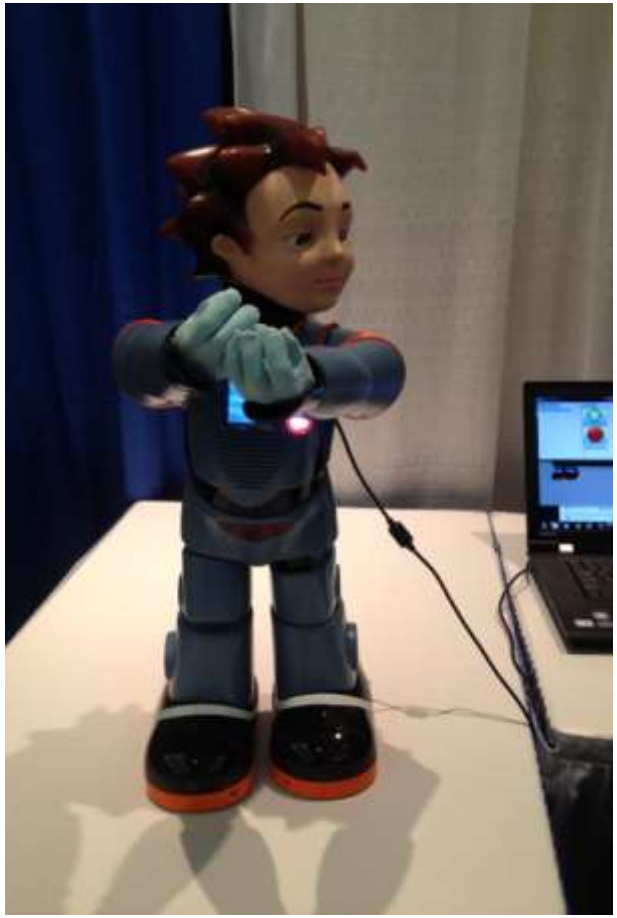

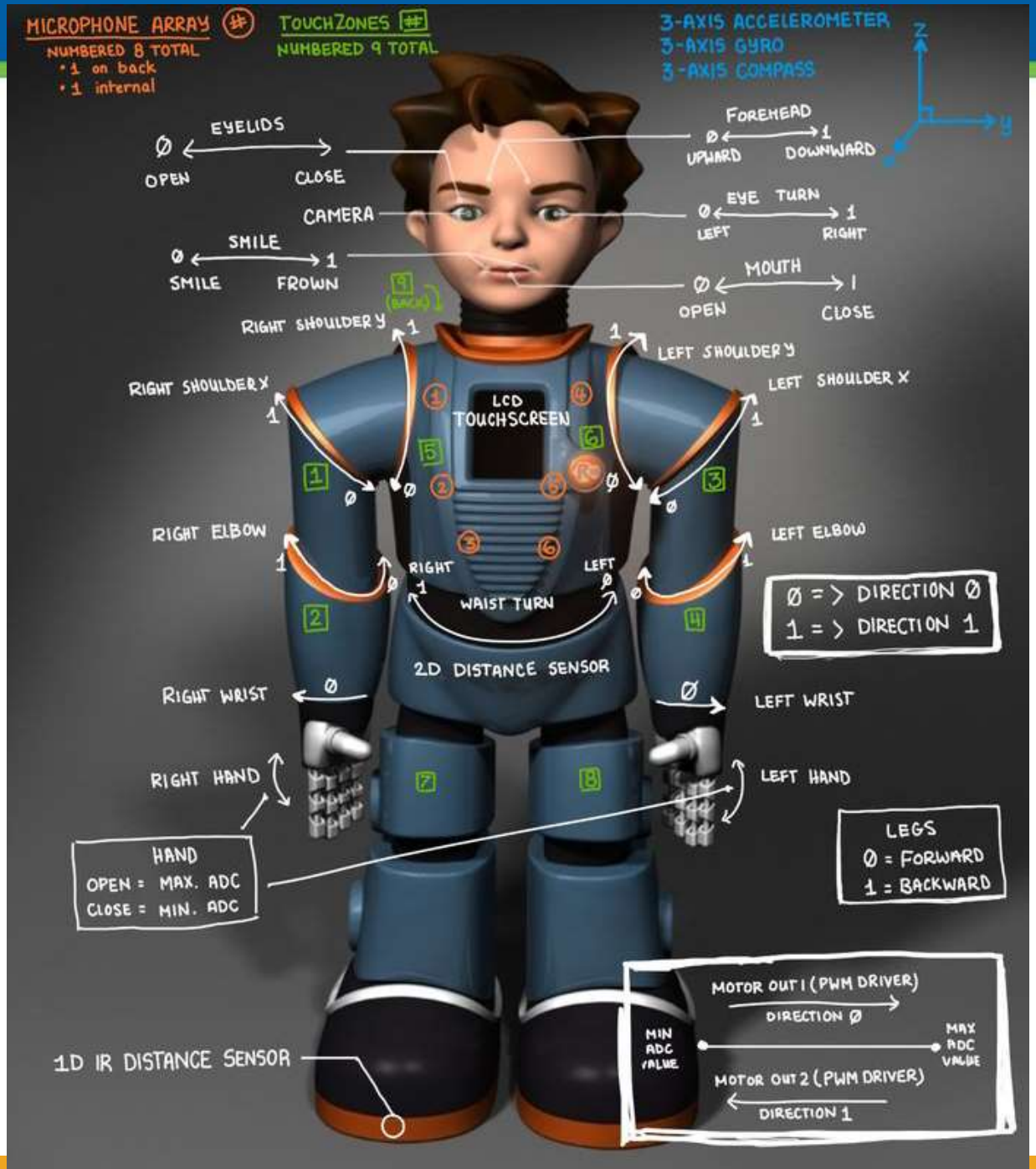

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Meet NAO!

Humanoid robot helps train children with autism

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

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Related Stories

Groundbreaking study finds children with autism hear and see out of sync JANUARY 15, 2014

Adaptive Robot-Mediated Intervention Architecture (ARIA)

- “NAO has been programmed with a series of verbal prompts, such as “look over here” and “let’s do some more,” and gestures such as looking and pointing at one of the displays, that imitate the prompts and gestures that human therapists use in joint attention training.”

- The protocol begins with a verbal prompt that asks the child to look at an image or video displayed on one of the screens.

- If the child doesn’t respond, then the therapist provides increasing support by combining a verbal prompt with physical gestures such as turning her head or pointing.

- When the child looks at the target then the therapist responds with praise, such as telling the child, “good job.”

Adaptive Robot-Mediated Intervention Architecture (ARIA)

- “One of the key elements of ARIA is its closed loop design. The robot adapts its behavior to each child automatically depending on how he or she is responding. The cost of robotic systems like this will continue to come down in the future so it should easily pay for itself by supplementing human intervention.”

- ”In addition, ARIA is not designed to replace human therapists, who are in short supply, but to leverage their efforts. “A therapist does many things that robots can’t do,” said Sarkar. “But a robot-centered system could provide much of the repeated practice that is essential to learning.

- This research was supported by a Vanderbilt University Innovation and Discovery in Engineering and Science (IDEAS) grant, National Science Foundation award 0967170, National Institutes of Health award 1R01MH091102-01A1 and by the Meredith Anne Thomas Foundation.

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Access4Kids: Tablet Computers and Children with Disabilities

December 10, 2012 — Ayanna Howard, a Georgia Tech professor of electrical and computer engineering, and Hae Won Park, a Georgia Tech graduate student, have developed and created Access4Kids with the goal of helping children with limited mobility, "giving them the ability to use what's in their mind so they have an outlet to impact the world." Access4Kids is a wireless input device that utilizes a sensory system to measure pressure, which translates a child's physical movements into fine-motor gestures that enables them to control and interact with a tablet computer. The current model of the device can be worn on the forearm or the arm of a wheelchair and the child uses their fist to hit the sensors. However, Howard is working on the development of a second prototype with wireless sensors that could be placed in any location the child is capable of hitting. The device has received positive feedback from children and has also received recognition within the industry, as the device was a finalist in a recent Intel-sponsored competition and was demonstrated to and received well by the British Consulate before the Paralympic Summer 2012 games. Access4Kids could significantly impact the lives of those children with an orthopedic disability by providing them the ability to use tablet computers and other touch screen devices they have, up to this point, been barred access.

ADDITIONAL INFORMATION

Tools Help

Atlantic Pediatric Device Consortium

Devices That Grow As Children Grow™

Access4Kids

Principal Investigators:

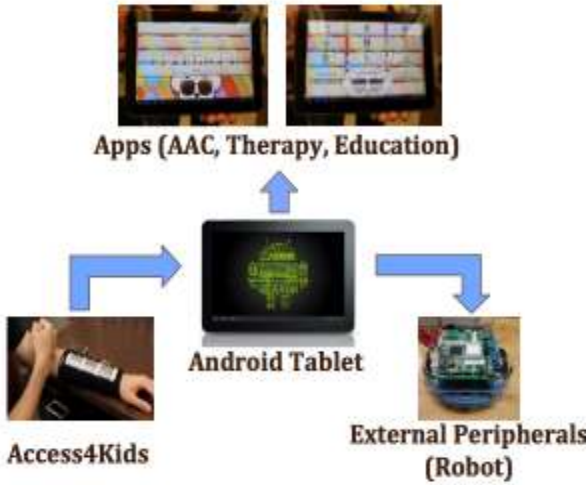
Ayanna Howard, PhD

Giancarlo Valentin

Hae Won Park

The Device:

Access4Kids is a unique assistive input device that enables access to rehabilitation apps for children with limited upper-body motor control. The wireless device utilizes a sensor system that translates any physically possible body press/swipe movements into fine-motor control gestures. Access4Kids, coupled with a supporting software library, enables control of off-the-shelf apps or control of custom-made apps to facilitate the delivery of effective therapy opportunities for children lacking fine motor skills.



Access4Kids Demo

How has APDC helped?

This project is funded by APDC. When the project joined the consortium the device was in the prototyping stage of development.

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

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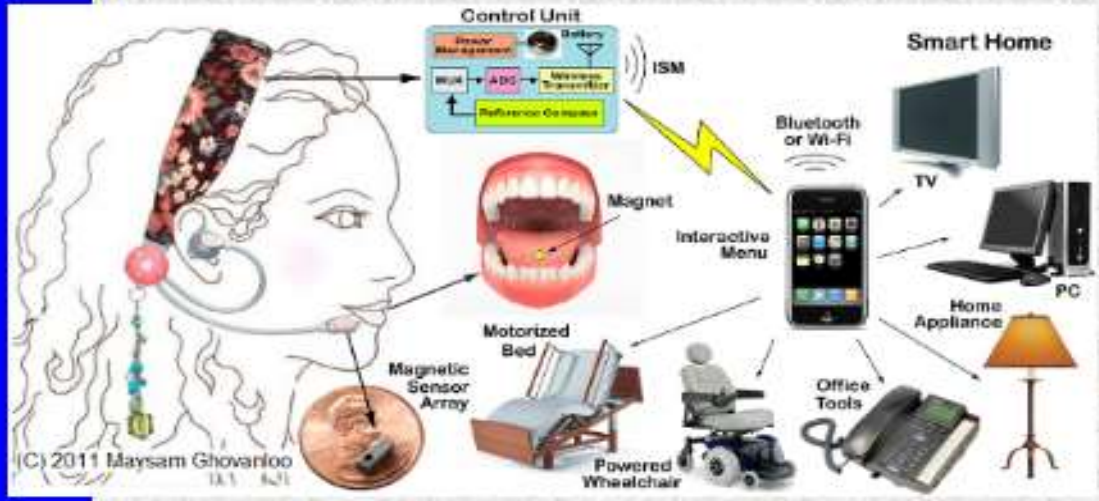

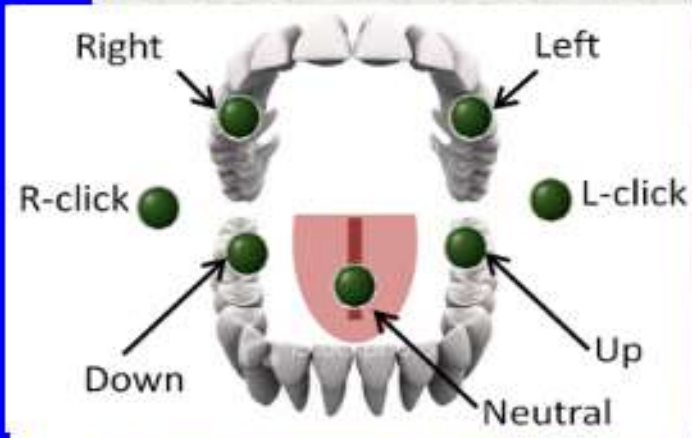

Intraoral Tongue Drive System (iTDS) Technical info

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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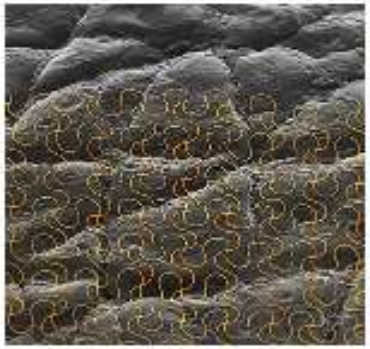
2010 FINALIST

Electronic Sensors Printed Directly on the Skin

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

By Mike Orcutt on March 11, 2013



Electronic tattoo. The image shows a colorized 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.

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WHY IT MATTERS

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

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Google announces Calico, a new company focused on health and well-being

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

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

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

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

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

Contact

Leslie Miller
Google Corporate Communications

Ten days with Google Glass

By Will Shanklin
December 23, 2013

14 Comments
7 Pictures

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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-

Revie
smartwatch

AAC-RERC
SPREAD THE WORD

The RERC on Communication Enhancement

Writers Brigade

Pamela Kennedy (Writers Brigade)

David McNaughton (Penn State University)

The Writers Brigade

Activities

The Writers Brigade (WB) operates under a two-fold mission: enhancing employability for adults who depend on assistive technology (AT) and publicizing the activities of the AAC-RERC. Participants in the WB will gain professional experience in writing and publishing articles that disseminate research in the field of AAC and AT.

David McNaughton and Pamela Kennedy are now implementing the AAC-RERC Writers Brigade. It was conceived of by staff at ACI in 2003 as a knowledge translation tool for the AAC-RERC and in response to findings that people with complex communication needs often are unemployed or underemployed. From 2003-2008, Johana Schwartz served as project manager and Sarah W. Blackstone as project director. Eleven individuals participated successfully and accrued more than 100 citations over four years. They developed a Guide to enable others to replicate and adapt the program to meet the needs of their own organizations/entites. For a free, downloadable copy of the Guide,**click here**.

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RERC on Communication Enhancement (AAC-RERC)

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This is the official facebook page of the RERC on Communication Enhancement (AAC-RERC). The AAC-RERC is funded under grant #H133E080011 by NIDRR. This page is maintained by David McNaughton, Penn State, aac.rerc@gmail.com

About – Suggest an Edit

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Events

Highlights

RERC on Communication Enhancement (AAC-RERC) shared a link.
June 5, 2013

Michael Williams' highly regarded presentation is now available on YouTube

How Far We've Come, How Far We've Got to Go: Tales from the Trenches

Michael B. Williams (ACI), a long time

Likes

Communication Matrix
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RERC on Communication Enhancement (AAC-RERC) shared a link.
August 29, 2012

As hurricane Isaac works its way across the southern United

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Welcome

For over twenty years (1988-2009) Sarah Blackstone wrote and published the leading international newsletter in *Augmentative Communication, Augmentative Communication News (ACN)*, distilling the ongoing research, exemplary practice, and new development activities in the field into a practical format that made it possible for clinicians, students and teachers to translate ongoing research and development into immediate practice. For fifteen years (1994-2009) Michael B. Williams, a gifted writer who himself relies on augmentative communication tools and strategies, wrote, edited, and oversaw the publications of *Alternatively Speaking*. This newsletter was written by and for people with complex communication needs and covered topics of personal and immediate interest to individuals who benefit using AAC.

Every single issue of these two seminal publications in the field of AAC is now available (AT NO COST) to anyone who wishes to read and download them.

AAC-RERC SPREAD THE WORD

The RERC on Communication Enhancement

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ACOLUG

Diane Nelson Bryen (Temple University) and

Tracey Rackensperger (University of Georgia)

Augmentative Communication Online User's Group (ACOLUG) is an Internet Listserv that allows users of augmentative communication and their families to communicate with each other and with professionals and students who are interested in augmentative communication. ACOLUG enables people who are separated by great geographic distances to "meet" and communicate with each other in a way that is convenient, comfortable and free!

ACOLUG, now in its 20th year has a diverse membership of more than 800 people from all states, Puerto Rico, the Virgin Islands, and Guam, and from 16 countries. The membership is primarily individuals who use augmentative communication ranging in age from 7 years old to mature adults. Family members also play a key role on ACOLUG.

Get Connected: ACOLUG

- Augmentative Communication Online User's Group (ACOLUG) is an Internet Listserv that allows users of augmentative communication and their families to communicate with each other and with professionals and students who are interested in augmentative communication.

- ACOLUG enables people who are separated by great geographic distances to "meet" and communicate with each other in a way that is convenient, comfortable and free!
- ACOLUG, now in its 20th year has a diverse membership!

Get Connected: ACOLUG

- **Activities**
- 825 subscribers to ACOLUG
- Subscribers from 15 countries
- 35 universities make use of ACOLUG as part of their pre-service professional training program

Membership Organizations & Email Lists

Organizations

International Society for Augmentative and Alternative Communication (ISAAC). "ISAAC supports and encourages the best possible communication methods for people who find communication difficult. [Members of ISAAC] have a 'vision' that everyone in the world who could communicate more easily by using Augmentative and Alternative Communication (AAC), will be able to do so." Website is in text with symbols (choose one as you enter the site): PCS from Mayer-Johnson, Blissymbols, or Widgit Rebus. What is AAC; Who benefits; Glossary of AAC Terminology; University and Research Directory (academic course content, clinical service delivery, research, clinical experience opportunities; searchable by topic); chapter and conference information. Journal and newsletter available with membership. http://www.isaac-online.org

US Society for Augmentative and Alternative Communication (USSAAC). The website provides "information on the technology, tools and therapies within the world of AAC. [...] our primary mission is to celebrate the individuals who rely on nonverbal communication." AAC Intervention, Prerequisites (There

English » Conference 2014

Conference 2014

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Research Symposium

The 16th Biennial Conference of ISAAC will be held from July 19-24, 2014, at the Lisboa Congress Centre, Lisbon, Portugal. Pre-conference Workshops will be scheduled on July 19-20; the AAC Camp will be on July 19-20; and the Main Conference will be held from July 21 to 24. The Research Symposium will be immediately following the Main Conference, on July 25-26.

Join us in Lisbon for keynotes, exhibits, workshops, social events, seminars, the AAC Camp and the Research Symposium – everything you have come to expect from an ISAAC conference, and more. Enjoy the history and culture of the "City of Light", in the company of old friends and new.

The ISAAC Biennial Conference program offers something for everyone with an interest in AAC. Presentations feature leading edge research, and clinical and educational interventions and innovations. People who use AAC share their experiences and perspectives. Posters focus on a wide range of topics, and the Exhibition showcases new technologies or applications of technology, products and services.

People who use AAC, individuals from emerging AAC nations (BUILD) and emerging researchers are eligible for travel grants. Details on the Awards and Scholarships page.

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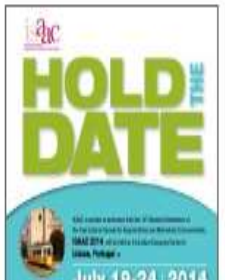

English » AAC Awareness » International AAC Awareness Month

International AAC Awareness Month

Archive material

International AAC Awareness Month

October 2013 Events

AAC Awareness events were held around the world to celebrate International AAC Awareness Month. A few examples are as follows:

- ISAAC-Francophone reports here (in English, PDF 27 MB) and here (in French, PDF 27 MB) on October 2013 AAC Awareness activities in France. In addition, please see the Caa Francophone page on Facebook.
- The 24 Hour Non Speech Challenge means not talking, voluntarily, for 24 hours. During that time, only alternative means of communication, such as writing, symbols, gestures, applications, etc. can be used. By attempting this challenge, you will help the general public understand the impact of using AAC in daily life and the obstacles faced every day.
- The Silent Morning Tea on October 1st, sponsored by Scope in Victoria, Australia, to raise awareness of the different ways of communicating with others.
- ISAAC Canada chose Thursday, October 3rd to be AAC Awareness Day. They will be sharing events from around the country on Facebook.
- Coffee Shop Communication Challenge on October 12th, in Hamilton, Canada.
- A Twitter Chat using the tag #AACaware on October 14th. Check out ISAAC Australia's blog for more information.

Participate in the 24 Hour Non Speech Challenge

The 24 Hour Non Speech Challenge means voluntarily not talking for 24 hours. During that time, only alternative means of communication, such as writing, symbols, gestures, applications, etc. can be used. By attempting this challenge, you will help the general public understand the impact that a communication handicap has on our daily lives and the obstacles that a person who cannot talk faces every day. Let us salute their courage and that of their families. Show your support by sharing their lifelong situation for one day.

Take the challenge

Communicate with me!

Participant Kit

Presentation card

Present that card to the people you will meet during your challenge, to let them know why you are not speaking and to explain what the 24h Non Speech Challenge is all about.

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When once you have tasted flight, you will forever walk the earth with your eyes turned skyward, for there you have been, and there you will always long to return.

— Leonardo Da Vinci

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Talk with Us!

What are Your Technology Trends?

TOOLS for LIFE
Georgia's Assistive Technology Act Program

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My Question to You:
What have You Learned today?

TOOLS for LIFE
Georgia's Assistive Technology Act Program

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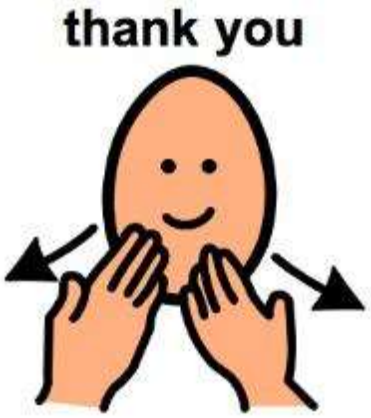
Thank You!



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