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Assistive Technology Partners Breaking Barriers. Changing Lives.

DID YOU KNOW?

**1 IN 5 PEOPLE
IN THE U.S. LIVES
WITH A DISABILITY**

Assistive Technology Partners envisions a world where all persons with cognitive, sensory and/or physical disabilities are engaged in life at home, school, work and play, without barriers and without boundaries.

To receive the communicATor e-newsletter or to request a hard copy, contact us: generalinfo@at-partners.org or call 303-315-1280.

Alternate formats available upon request.

As technologies merge, blurring the lines between computer and telephone, television and browser, book, camera and media player, tremendous opportunities have emerged to assist people with disabilities to lead more fulfilling and independent lives. Never before has such computing power, capacity, portability and declining cost offered the opportunity to develop truly revolutionary tools to communicate, contribute, access and participate.

The work performed at Assistive Technology Partners (ATP) defines the leading edge in research, design, testing and application of appropriate technologies for persons with cognitive, sensory or physical disabilities. Our faculty has created and developed the most comprehensive program in the field for identifying, evaluating and testing these technologies, and for helping increase, maintain or improve the functional capabilities of those with disabilities or limitations due to aging.

Assistive Technology (AT) is any tool that helps a person with disabilities or limitations due to aging perform everyday tasks more effectively, allowing them to maintain greater independence. Making it possible for people with disabilities to optimally employ these tools is the mission of ATP. ATP employs a comprehensive suite of services to accomplish its mission. These include; Clinical Services, Outreach and Information, Research and Engineering, Product Testing Business Services and Education. This newsletter will introduce you to each of our programs and provide you with more information on how ATP can help you or someone you know. **ATP**



Legislative Luncheon Hosted at Assistive Technology Partners

In November, ATP and the University of Colorado Anschutz Medical Campus hosted state legislators for a Legislative Lunch and Learn. With over twenty in attendance, representing bipartisan participation, it was a fantastic opportunity to talk about the value of AT for individuals with disabilities. Cathy Bodine, Executive Director at ATP, educated the legislators on the growing population of individuals with disabilities who could benefit from AT. She noted that over a billion people, about 15% of the world's population, have some form of disability and between 110 million and 190 million people have significant difficulties in functioning. Rates of disability are increasing worldwide due to aging populations and increases in chronic health conditions.

Dr. Bodine provided an overview of ATP and our mission to serve those with

disabilities. She explained that ATP was originally established in 1989 as one of the first nine Statewide Technology Act Programs funded by Congress after the passage of the Technology-Related Assistance Act of 1988 to provide awareness of the benefits of technology for disability (PL 10-407, 1989).

Dr. Bodine explained that ATP's major initiatives include: Outreach and Information Services, Applied Clinical Research, Engineering Research and Development and Education and Professional Development. She discussed the needs in the state and nationally for creation of a body of evidence regarding efficacy of social and therapeutic impact of AT service delivery, development of cost-effective products such as social robotics for seniors, engaged end users and support personnel, including families, to better understand the user experience

and utilize knowledge to impact future product designs, as well as numerous other challenges such as funding of programs in research, education and clinical delivery and development.

Legislators were very receptive to the needs in the state and discussed how they might better address the AT concerns of those with disabilities. This initial meeting was an essential step in educating our politicians about the importance and value of AT.

Social Media

Have you 'liked' ATP on Facebook yet? ATP's facebook page is full of up to date information on upcoming trainings, current legislation, new and improved gadgets and links to other AT and disability service providers in Colorado and around the nation.

Like us today!





The Colorado Assistive Technology Program

The Colorado Assistive Technology Program was initially funded in 1989 by the National Institute on Disability Rehabilitation Research (NIDRR) and the U.S. Department of Education as Colorado's "Assistive Technology Act" project. Under the Assistive Technology Act of 2004 P.L. 108-364, a new State Plan was developed and is known as the Assistive Technology Program of Colorado. The program coordinates and collaborates with other state agencies and organizations to address priorities outlined by NIDRR. Oversight for the program is provided by the Rehabilitation Services Administration (RSA), Office of Special Education and Rehabilitative Services (OSERS) at the U.S. Department

of Education. The program is governed and advised by the Colorado Assistive Technology Coalition, comprised of AT users and state leaders of organizations that provide AT training, devices and services.

The overall goal of the program is to improve access to AT in education, employment, community living, information technology, and telecommunications. This is accomplished through State Level Activities including Device Demonstrations, Financing Activities, and a Loan Bank as well as State Leadership Activities to increase public awareness about AT, improve access to AT devices and services, and provide training and technical assistance on the use of AT.

These goals are accomplished through coordination and collaboration with other agencies and organizations.

The program has targeted several initiatives to help address these priorities. These include: [AT Funding Sources](#), an online resource that identifies funding options for AT in Colorado; [AT Finder](#), an online resource to assist individuals in obtaining new and used AT devices; and, [Device demonstration events](#), community based demonstrations that provide interactive opportunities to learn about AT devices and applications.

To learn more about the Colorado Assistive Technology Program visit the Assistive Technology Partners web site - www.assistivetechologypartners.org.

Research at Assistive Technology Partners

ATP is involved in a number of innovative and exciting research projects. As the lead agency for the Rehabilitation Engineering Research Center for Advancing Cognitive Technologies (RERC-ACT) for the past 10 years, ATP has managed several research projects exploring AT applications for individuals with cognitive disabilities. Our faculty includes researchers with a long track record of designing and conducting research projects. Team members include faculty specializing in AT, computer architecture, digital media production, rehabilitation engineering, biostatistics, and software and hardware development.

Current Research Projects Include:

- **Product Testing Laboratory** - This project investigates the feasibility of implementing a technology system in the workplace that uses Context Aware Prompting System (CAPS) to act as a job coach/training aid for adults with cognitive disabilities.
- **Non-Linear Context-Aware Prompting System for Persons with Cognitive Disabilities: A 12 month pilot feasibility study** - This project investigates the feasibility of implementing a technology system in the workplace that uses a Non-Linear Context Aware Prompting System (NCAPS) to act as a job coach/training aid for adults with cognitive disabilities.
- **Effects of a Mobile-Based Skill Building Coaching Technology Intervention for People with Cognitive Disabilities: A 6 month randomized controlled-pilot feasibility study** - This research investigates the usefulness and efficacy of a mobile prompting system. We call this system the Mobile Coach. It is a device configured to help an individual with disabilities perform predefined mobile jobs.
- **Early Developmental Skills Acquisition and Socially Assistive Robotics (SARS): A Pilot Investigation of Effectiveness** - This research project is investigating the impact Socially Assistive Robotics has on motor, communication and cognitive skills of children with disabilities. We need children to test our Socially Assistive Robotic Prototype, which is the equivalent to a child playing with a toy robot made to resemble a stuffed animal.





Business Services at Assistive Technology Partners

More companies and organizations recognize the need to make not only their products and services accessible to people with disabilities, but also the importance of making their facility, systems and infrastructure accessible as well. To address the demand for guidance in this area, Assistive Technology Partners has created the Business Services program.

Using their unique and extensive experience in the field of AT and issues surrounding accessibility, ATP established Business Services to provide this expertise to the business community. The ATP Business Services program helps companies and organizations identify and address their accessibility needs. These include not only the physical accessibility needs of a building or facility, but the accessibility of office tools, communication modes, documents and IT infrastructure.

The types of services and consultation provided by Business Services include:

- Evaluating websites for accessibility - including user testing, and providing recommendations for making them accessible
- Making information and Communication Technology (ICT) systems accessible (e.g., computers, networks, telephones, etc.)
- Integrating AT within existing ICT infrastructure, and public

computing space such as libraries and work skills centers.

- Identifying AT solutions for individuals, groups, and organizations, and facilitating the acquisition, implementation and training needed to achieve regulatory and legal requirements for accessibility.
- Document and materials accessibility.
- Accessibility for emergency planners and first responders.

Understanding the User Experience

As suggested in the above list, Business Services provides not only consultation in these areas, but accessibility evaluation through actual user testing. This is done through the program's Product Testing Laboratory, which carries out usability and accessibility testing of software and hardware products used by people with disabilities. ATP's unique capacity to access a broad range of people with disabilities enables Business Services to accurately assess how people with disabilities will respond to a company's products and systems.

Customized education and training development in areas of disability awareness and accessibility round out the array of services the program offers businesses. Education services include: Customized professional training and



webinars; Self-paced online courses; Resource Materials and curriculum for speakers, lecturers, educators and other presenters; ICT documentation and training.

Business Services provides expert consultation, user experience and product testing, and professional education all focused on the needs of businesses, educational institutions, organizations and government agencies. The goal of Business Services is to help businesses become more accessible.

Visit www.assistivetechpartners.org to learn more about how Business Services can help your business.

Contribute to Assistive Technology Partners

There is much more work to be done, and you can help. ATP relies heavily on donations, grants and other sources for funding. Your contribution allows ATP to provide a full-range of AT services to help persons with cognitive, sensory and/or physical disabilities reach their highest potential at home, work, school and play.

Donations can be made by phone at 303.315.1281 or mailed to CUDenver/ATP, 601 East 18th Avenue, Suite 130, Denver, CO 80203.

If you or someone you know can benefit from AT please contact us at 303.315.1280 or generalinfo@at-partners.org.



CLINIC SPOTLIGHT

Assistive Technology Partners Clinic

Through ATP's Clinical Services program, our clinical faculty provide direct one on one assessment, consultation and training services to individuals with disabilities in order to assist them in the selection, acquisition and use of AT in the following areas:

- Augmentative/Alternative Communication (AAC)
- Computer Access
- Electronic Aids of Daily Living
- General Motor Access
- Learning and Cognitive Aids
- Sleep Positioning
- Early Intervention
- Wheelchair Seating and Mobility
- Worksite Accommodation/Ergonomics
- Wheelchair Performance Testing

ATP's clinical faculty includes physical therapists, occupational therapists, speech-language pathologists and rehabilitation engineers. This cross-disciplinary team has extensive experience and expertise in highly specialised areas to meet the AT needs of each individual, regardless of their age, functional limitation or complexity of need.

Over the past few years we have seen some amazing success stories at our ATP clinic. Clients like [Brooklyn](#), a bright 3 years old with severe spastic quadriplegic cerebral palsy who experienced significant positive outcomes after being outfitted with a Dreama mattress in our Nighttime Positioning Clinic.

Or [Terry](#), a 50 year old with significantly impaired speech who with the help of staff

at ATP has learned to communicate with an AAC device, opening him up to a world of speech so long closed to him.

The ATP clinic has also helped [Andrew](#), a young boy with Arthrogryposis, a condition resulting in essentially no movement below his waist, get him trained and outfitted with a brand new, shiny red power wheelchair for his 3rd birthday.

And finally, [Rueben](#), an elementary school teacher with a significant visual disability who was able to utilize AT in order to transform his classroom into a tech friendly learning environment for himself and his students.

To schedule an appointment or to inquire about our services, please call 303.315.1282.

StateWide Assistive technology Augmentative Alternative Communication

SWAAAC is a statewide initiative supported by the Colorado Department of Education and managed by ATP. The program supports a network of AT teams across all school districts in the state of Colorado. SWAAAC teams are interdisciplinary groups comprised of education professionals from disciplines such as speech language pathology, occupational therapy, physical therapy, special education and psychology. They provide AT services in schools and classroom settings within their districts, with the intention of enabling students with disabilities to achieve full access and participation in all educational opportunities. SWAAAC teams originated in Colorado schools in 1985 with 25 members. Today, there are over 60 participating school districts and 455 SWAAAC team members across the state.

The Individuals with Disabilities Education Act (IDEA) legislation mandates the consideration of AT for all Individualized Education Plans (IEP) to support a child's participation in his/her least restrictive learning environment. In the school setting, AT is a lifeline that provides students with equal access to information and learning. AT can help students with physical disabilities, speech, visual or hearing impairments and learning differences. Successful AT intervention combines the efforts and support of the student, his or her parents, the classroom teacher and the supporting educational team.

Any person who is a member of an IEP team may initiate a referral to the local SWAAAC team. Contact information for these teams can be found on the SWAAAC website - www.swaaac.com - under the About Us section.

The SWAAAC loan bank provides AT device loans to children in the public school system through their district Team Coordinator. The purpose of the loan bank is to provide individuals with access to equipment for evaluation and trial purposes. The purchaser, whether it is a third party payor, a school district or a parent, needs to have some indication of whether the purchase and use of the technology will be beneficial to the student. Equipment may also be used by SWAAAC team members who may need to learn to use the equipment in order to better serve a student.





Engineering at Assistive Technology Partners

The diversity of engineering needs at ATP covers a large domain. Just a few of the areas that the engineering team services include: 1) Product prototyping and development; 2) Research catalyst; 3) Web development and maintenance; 4) Business process analysis; 5) Technology research for clinical application; 6) Mentoring Senior Design teams at a number of local universities; etc.

In general, the ATP Engineering team is a support team. Like all organizations that use technology, there are varying degrees of technical support required. Working closely with our physical, occupational, and speech therapists, the engineering team strives to thoroughly understand the problem domain and make the most informed technical decision to benefit the end user. Human centered design is the team's core philosophy.

Over the past few years, the engineering team has had the opportunity to work on a number of exciting projects. The NCAPS project helps people with cognitive disabilities perform repetitive work related tasks. Using vision sensing, this system can track the human movement necessary to construct Chocolate First Aid Kits. While the worker is correctly proceeding with the construction, the system quietly monitors the activity and occasionally provides positive reinforcement of a job well done. If the worker becomes stuck or performs an incorrect action, the system will provide an assistive prompt using either audio, images, and/or video depending on the situational needs.



Another exciting project, The Mobile Coach, is also known as the "Mobile-NCAPS." This system assists mobile workers who might work in a warehouse or in large campus environments. The Mobile Coach operates on a smart mobile device such as an Android Phone or an iPad. Smaller devices can be attached to the person's arm using a band, meanwhile larger devices can be mounted to a cart. In either case, the Mobile Coach prompts the worker through the tasks necessary to complete one or more daily activities.



Finally, our Social Robot Project was conceived based on the growing evidence that robots have therapeutic value. They have been found to help people with dementia, stroke recovery, autism, etc. Social Robots have the potential to assist young children with cognitive disabilities learn to perform early developmental skills. Without lots of repetition, many young children may not develop important functional skills. This can have a significant impact later in life. The breadth of this project continues to grow and our team sees many exciting opportunities to be addressed in upcoming years.

The work performed by our engineering team considers the technology advancements occurring globally and applies these technologies in new and innovative ways to help people with disabilities.

Upcoming Trainings - Join Us

ATP has a great line up of trainings for you to choose from over the coming months. For more information visit Upcoming Events under the Events section of our website - www.assistivetechologypartners.org. From there you can download informational brochures and register online.

- [Creating eBooks, Integrating Progress Monitoring Tools, Broadcasting & Sharing Content](#) - Presented by Dan Herlihy and Hosted at the University of Colorado Anschutz Medical Campus with distance locations in Colorado Springs, Durango, Haxtun and Lamar on April 24.
- [Wheelchair Seating for Postural Control and Function](#)- Presented by Kelly Waugh, PT, MAPT, ATP and Hosted at Assistive Technology Partners in Denver on April 24, 25 & 26.
- [SWAAC Summer Symposium 2014: Assistive Technology for Inclusive Literacy Instruction](#) - Hosted at The Conference Center at Adams 12 in Thornton, Colorado on June 9 & 10.

To keep up to date on the latest ATP trainings join our electronic mailing list. Please contact elizabeth.woodruff@ucdenver.edu to be added to the list.