Technical Innovations and Independence: Living Comfortably, Independently and Safely at Home

Dan Fendler
AT Specialist
DATI Sussex County ATRC

Technology touches virtually all areas of our lives. And because the cost of many technologies has come down quite significantly, wonderful options are now affordable.

The rapid advance of technology has boosted the ability for all people to live fuller, richer and more independent lives. In this article, we will explore some of the areas in which technology can help people live more independently. We'll learn about useful and affordable “Smart Home” technology and ideas. We will also look at low-cost tips to help maximize your independence. (Please note: commercial products mentioned in this article are for illustrative purposes only. We make no claims and are not endorsing any of the products mentioned here.)

Appliances
Let’s take a look at some of the innovations available in today’s appliances, starting in the laundry room. Everyone needs clean clothes. Whether you have a disability or are just getting older, “doing the laundry” involves a number of steps. Typically, you load the washer, wait for it to finish, transfer the clean, wet clothes to the dryer, wait for them to dry and then fold. If you
could eliminate the need to transfer the clothes from the washer to the dryer, then the chore would be a little bit easier.

Until recently, there weren’t many affordable options to simplify this chore. Today, there are a number of combination washer/dryers that eliminate the need to transfer the clothes from one machine to the other. And they are available at a relatively low price. One example is the LG WM3987HW (see photo). Note that it is front loading, which is easier to access for some people. Many of the combination units do not require external venting and they also plug into a standard 110v outlet (unlike most stand-alone electric dryers that require a 220v electrical source). Be aware that there is a tradeoff with non-venting units: While they do not require 220v outlets or additional venting, they may require additional washer/dryer time to run a complete laundry cycle. In fact, it may take considerably longer than drying in a traditional dryer. Because there are so many commercial options available, you might want to compare features of various products. The computer is great for that; just type “combination washer dryer” into your Internet browser’s “search” window. If you don’t have access to a computer or Internet or you have questions, please feel free to call your local ATRC for assistance.

Moving on to the kitchen, here’s an idea that may help a number of folks. After a recent back injury, I noticed how heavy the dinner plates were as I struggled to move the clean plates from the dishwasher to the cabinet.
Curiosity got the better of me, so I actually weighed the plates. I was surprised to learn that the entire stack weighed over 28 pounds! What if you could eliminate the need to put the dishes away? With the creative use of a drawer-style dishwasher, you can. With a two-drawer system, you can use one drawer for clean dishes and the other for dirty dishes, eliminating the need to ever stow the dishes in a cabinet.

The placement of appliances can also be important. When building or redesigning your kitchen, consider how and where built-in appliances are placed. There are a variety of under-the-counter refrigerators available. The strategic placement of ovens and microwaves can also help facilitate access. Also consider slide-out cabinet shelves. Sliding shelves can make access to cabinets much easier for everyone.

**Home Automation**

A variety of home automation equipment can facilitate independent living. Automation can enhance independence by increasing safety and security, enabling effortless control of the environment and providing peace of mind to concerned loved ones. Video cameras inside and outside your house can add to a sense of security. They can be accessed from the Internet and may help family members keep a watchful eye on aging relatives living alone. A Panasonic BL-C131A Network Camera is one product on the market. (Note: Web cameras require high speed Internet access, which involves a monthly fee.)
There are a number of ways you can control your home environment (including lights, appliances and security systems). Here are a few examples:

- From your smartphone
- From a computer
- From specialized remotes, touchscreen panels or specialized light switches
- From outside your house
- Automatically, based on personal or seasonal schedules
- Automatically, based on other “events”—doors opening or motion sensors being activated
- One at a time or all together.

Notification Systems

Notification systems can also increase a sense of security. A notification system is defined as the combination of hardware with a software program that is capable of sending messages to a pre-defined set of recipients. For example, the woman on the infamous “Help, I’ve fallen and can’t get up” commercial wore a small, wireless transmitter that sent a signal to a device connected to her telephone line. The system was preprogrammed to automatically contact a support center that would subsequently contact the individual needing help. If need be, the support center staff would contact local emergency responders.

Before deciding on a particular notification system, you should do some research. A quick search of the Internet shows that there are a few vendors with a number of complaints. Find out if the company you are considering has a high number of complaints against it. Understand the contract terms
and do not enter an agreement with unreasonable restrictions or potential penalties (e.g., early termination fees). A simple Internet search might provide valuable information. Again, if you don’t have access to a computer and/or would like more information, please contact your local ATRC for assistance.

**Additional Considerations**

There are numerous ideas that can help people remain safe in the bathroom. An Internet search for “safety in the bath” produces many options—grab bars, accessible tubs, bath benches, transfer boards and many other items. The important thing to remember is that falls are serious events, and every precaution should be made to reduce the risk of a fall ever happening.

GPS (Global Positioning Systems) can be used to track individuals who have a tendency to wander (such as people with Alzheimer’s). While these systems hold promise for some, they generally are only available as part of an ongoing service and involve monthly service fees. There is a free system that can be installed on some smartphones, but it has limited abilities. If you are interested in learning more about one of these systems, check out the Alzheimer Association’s Comfort Zone® at [www.alz.org/comfortzone/](http://www.alz.org/comfortzone/).

Project Lifesaver ([www.projectlifesaver.org](http://www.projectlifesaver.org)) may also be helpful. According to their website, the primary mission of Project Lifesaver is to provide timely
response to save lives and reduce potential injury for adults and children who wander due to Alzheimer’s, autism and other related conditions or disorders.

**Low-Cost Tips**

Here are a few practical, low-cost tips to promote independence and safety:

- Simplify your environment; keeping organized can help reduce accidents.
- Avoid stairs.
- Use your car alarm as a notification system. Carry your keyless car remote with you at all times, and let your neighbors know to call for help if your car alarm sounds.
- Prevent falls; put grab bars and non-slip mats in the bathroom.
- Improve lighting in areas where you might fall.
- Store frequently used items in easy-to-reach spots.
- For added security, carry a charged cell phone with you, even at home.
- Use timers for irons, coffee pots and other appliances needed for short periods that can cause injury or property damage if left unattended for too long.
- Arrange to call a friend or relative on a schedule. Let them know to call for help if they don’t hear from you.
- Highlight uneven surfaces with contrasting colors.

On a recent trip to a local big box store, I noticed a display called “Lowe’s Accessible Home™,” which included a few accessible products, including a walk-in bath. There is a guide available with a number of practical ideas, along with an accessibility checklist that is worth checking out. The guide is
available on the Internet at
http://www.lowes.com/cd_accessible+home_133799062_.

There are literally dozens of new technologies that carry the potential of helping many people lead more independent lives. If you would like to learn more about available technology that may meet your needs, please feel free to contact your local ATRC.

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The AT Bargain Basement

*Marvin Williams*

*AT Specialist*

*DATI New Castle County ATRC*

Hello, True Believers, and welcome to the AT Bargain Basement! This is the home of the assistive technology, or AT, bargain. I am your master of ceremonies for this AT garden party, Marvin Williams. If you’re old hat to the Bargain Basement, welcome back! If you’re new, let me explain how this works. I bring you various AT devices that your fellow Bargain Basement dwellers and I find for $100 or less. Some of the bargains will be in local stores and some may only be available online. If the item is available online, note that there may be shipping charges lurking in the shadows! If you share a bargain with me, I will gladly give you credit when sharing that bargain with the group. If you share winning lottery numbers with me, however, I will not be so kind. So without further ado, let’s get to the bargains!
My first bargain is the Sure Clip magnified nail clipper. This is handy for anyone needing to trim their finger or toe nails, without trimming their fingers or toes because they have trouble seeing. The clippers have a magnifier attached to them right near the cutting head. This makes it easier to see your nail going into the head to make sure you don’t cut too much. There’s also a light to make sure things are bright enough for you to see. I saw this unit in Big Lots in New Castle (the new one on Basin Road) for $2. I’ve also seen them at Walgreens.com for $9.99 (with free shipping), Kmart.com for $4.99 (with free shipping to the store nearest you, which is great if you can get to the store), and from Amazon.com for $5.96 (with about $4 for shipping and handling). So there are indeed options out there for getting these clippers.

Switching gears, I’d like to talk about a very high-tech tool. It’s the Camera Mouse, an alternative mouse controller for Windows-based computers. This software allows you to control the movement of your computer’s mouse using your head. That’s right, using your head. Using the computer’s webcam (you have to have a working webcam for this to work), you can move your mouse by moving your head. How do you click? No, not by doing your best impersonation of Jeannie from “I Dream of Jeannie.” There are other utilities that help you click by either clicking a switch or just by keeping the mouse in one spot for a given time (you can set that time to be as short or as long as you want).
I’ve used this tool a few times and it’s pretty darned cool. It’s very effective and you can’t beat the price. The software is available as a FREE download from cameramouse.org. I’ve only used it on a Windows computer running the Windows 7 operating system, but on the Website, the software creator says it works on computers running Windows 7, Vista, or even XP. The software is surprisingly accurate. I’ve found it can help to add a little reflective tape to the focus point on the head, but even without that, it does a great job. You would be hard-pressed to find a commercial product that functions half as well for anywhere near that price. If you don’t have a webcam, you can get one for less than $30 these days from Walmart, Target, Best Buy or just about any store that sells electronics.

My last bargain is only available here in Delaware. I recently visited my friend Jason Burns who runs the Goodwill Medical Equipment shop on Lea Boulevard in Wilmington, and I saw some fantastic walkers that looked brand new! There are even specialty strollers. I knew they were donated equipment he and his guys had cleaned up and refurbished to look wonderful. However, I didn’t know that the majority cost $100 or less! He has the aluminum walkers often seen in yard sales, but I’m also talking about the fancy ones that usually cost $80 or more. He has those and they’re in like-new condition. Any broken parts have been replaced and they’re ready to go.

Of course, if you think you may need a walker, you should consult your doctor and a licensed physical therapist before going out to purchase one on your own. Even if you get one from Jason and the folks at Goodwill, you should still take it to a therapist to have it properly fitted (yeah, these things
need to be personalized) and to learn how to use it safely. Also, you want to make sure you have the correct feet on them. There are many configurations for walkers. All four legs can have rubber tips like those on a cane; wheels can be on the front and rubber tips on the back; wheels can be on the back and rubber tips on the front; or wheels can be on all legs. There can also be little sleds or skis to make moving over carpet easier, and sometimes tennis balls are cut to fit over the rubber tips. I’m telling you, the options seem nearly endless! So it’s important to make sure you’re using the appropriate device for safety and comfort. A therapist can definitely help you with that. Oh, I guess I should tell you that you can call the Goodwill store at 302-463-1465 and check out their inventory at www.goodwillde.org/DME.

That does it for this installment of the AT Bargain Basement. Join us next time when we’ll look at more bargains that may make a difference in your life or the life of someone you care about. As usual, feel free to send along your bargain finds via e-mail to marvinw@udel.edu and follow me on Twitter @mwilliamsAT. ‘Til next time, remember, just because something’s cheap, doesn’t mean it’s a bargain! ■

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**A Reminder from a Conversation - SETT and sliced bread**

*Vanessa Lombardo, M Ed., ATP*

*AT Specialist/Special Education Teacher*

*Advancing Opportunities*

Yesterday I had an interesting conversation with a Child Study Team case manager. A student on her caseload experienced a traumatic brain injury (TBI) and struggled to return to school. She had a history of difficulty with academic tasks, and her struggles had been an issue for a long time. The case manager reached out to me for help in determining what assistive technology could help the student.
injury several years ago and has difficulty with both reading and written expression. Overall, the student’s academic abilities are on a kindergarten/first grade level and she reads on a pre-primer level.

This student recently received a neurological exam in a clinical setting. The summary of the exam included findings regarding neurological functioning, as well as specific assistive technology recommendations. The specific assistive technology recommendation was to use Dragon Naturally Speaking (DNS) to provide support for writing and note taking. The IEP team had a phone conference with the doctor who conducted the neurological exam, who contended that “Dragon Naturally Speaking is the only support this student will need.”

The case manager asked me my opinion. I told her that without ever meeting the student, it would be impossible for me to say if DNS would be an appropriate support or not. I also told her that DNS does not provide a student with reading support.

Here is the punch line of this story: She asked me if I had a “list of reading supports” that I could “recommend” for this student.

From here I started speaking with her about the SETT Framework by Joy Zabala. It is critical that we as AT Specialists remind others about focusing on the student and feature matching BEFORE any tools are discussed. Child Study Team members and families are looking for tools to support their students, and only want what is best for their students. They can easily get sucked into the spinning vortex of a “great piece of technology.” We must be the voice of reason that helps the team take a deep breath before they go out and purchase the next best thing since sliced bread.
The next issue of the AT Messenger will examine these issues in depth. Stay tuned... ■

The Center for Disabilities Studies - Home to the Delaware Assistive Technology Initiative

As you may know, the Delaware Assistive Technology Initiative (DATI) is part of the Center for Disabilities Studies (CDS) at the University of Delaware. CDS is also home to many other programs that support the well-being, inclusion and empowerment of people with disabilities and their families. The mission of CDS is to enhance the lives of individuals and families through education, prevention, service and research related to disabilities. The Center promotes independence and productivity so individuals and families can fully participate in the life of their communities in Delaware and beyond. Furthermore, CDS is:

• One of 67 University Centers for Excellence in Developmental Disabilities (UCEDD) Education, Research and Service nationwide, with core funding from the U.S. Department of Health and Human Services’ Administration on Developmental Disabilities
• The largest research and service center in the College of Education and Human Development at the University of Delaware
• A hub for the professional and personal development of students through coursework, internships, assistantships and participation in research and demonstration projects
• Home to the interdisciplinary Disabilities Studies Minor, one of the fastest-growing minors on the UD campus
• A place where staff and faculty cultivate student learning by:
  • Teaching or co-teaching courses to graduate and undergraduate students
  • Delivering guest lectures to UD graduate and undergraduate students
  • Supporting graduate students with full assistantships
  • Providing experiential opportunities to graduate students
  • Providing internship opportunities to undergraduate students.

The Center for Disabilities Studies is organized into units, the focus of which are described in the rest of this article.

The Transition, Education and Employment Model (TEEM) programs use a person-centered approach to offer people with disabilities a comprehensive set of services, supports and opportunities that will enable them to develop the skills needed to increase their independence, lead productive lives and participate in the community as adults. Programs include: the Career and Life Studies Certificate (CLSC) postsecondary education program; Employment Services; and Community Connectors. All of these programs are pioneering innovative strategies designed to advance policy and practice.

The Health and Wellness unit focuses on improving the health and well-being of individuals with all types of disabilities across the lifespan—and
their families—through education, information dissemination, technical assistance, research, policy work and systems change activities. It includes all health-related initiatives within CDS, allowing for optimal coordination of activities in this area. This unit houses Healthy Delawareans with Disabilities (HDWD), Emergency Preparedness for Individuals with Disabilities (EPID), Family Support and Healthcare Alliance Delaware (Family SHADE), Developmental Screening Campaign, health care transition initiatives and other health-related projects.

The School Age unit conducts training, technical assistance, evaluation and research for a variety of projects that promote student success. Programs include: Adapting Curriculum and Classroom Environments for Student Success (ACCESS) and the Delaware Positive Behavior Support Project (DEPBS). This unit also provides technical assistance and monitoring for afterschool programs funded through the federal 21st Century Community Learning Centers program.

The Assistive Technology (AT) unit, which includes DATI, also focuses on accessible instructional materials (AIM), various forms of language representations (e.g., pictures and videos) and recycling of durable medical equipment.

The Disabilities Studies Minor engages undergraduate students from across the University in learning about the policies, services and systems that support the full participation of people with disabilities in all aspects of community life. The minor requires students to complete 18 credits, nine of which are from required courses. Three electives are selected from courses focusing on human development, social systems and service delivery offered by various colleges and departments. CDS delivers the minor in
partnership with the School of Education and Department of Human Development and Family Studies. The Center provides administrative, advising, fiscal and instructional support, with its faculty and staff serving as instructors in key courses. The minor is one of the largest in the University with 2011-2012 enrollment approaching 300.

The Dissemination and Advocacy unit—through publications, a website, informational meetings, advocacy efforts and other activities—works to ensure that people with disabilities and their families have access to current information about legislation, services and supports that will help them participate fully in community life. Dissemination and advocacy activities are directed toward legislators, the media and other members of the community to make them aware of the supports and services that people with disabilities need in order to be fully included in society.

You are encouraged to learn more about CDS, its projects and more at http://www.udel.edu/cds.

Colleen Morrone
Chief Mission Officer
Goodwill of Delaware and Delaware County
Through a partnership with the University of Delaware’s Center for Disabilities Studies (CDS) and its Delaware Assistive Technology Initiative (DATI), Goodwill of Delaware and Delaware County (Goodwill) has launched a project to provide access to gently-used durable medical equipment (DME) for Delaware residents with disabilities who might not otherwise be able to acquire such equipment.

Stemming from the Delaware Recycles and Reuses Assistive Technology Project, this initiative expands access and creates a system to connect individuals in need with reconditioned DME. According to Zanthea Nichols, director of Workforce and Business Development, the Goodwill/University of Delaware’s Center for Disabilities Studies partnership is helping to utilize shrinking health care dollars, creating new job training and employment opportunities for the community, and promoting green initiatives of recycling and reuse through the program, which will keep unwanted equipment out of Delaware landfills.

“This initiative has multiple benefits to the community we serve,” Nichols said. “Those who need durable medical equipment, but cannot afford to buy it new, now have an affordable source for the equipment that will improve mobility, independence and overall quality of life. We have partnered with Chimes of Delaware, serving people with developmental disabilities and other specialized needs, to enable their clients to obtain valuable work experience.”

Through an agreement with the Division of Medicaid and Medical Assistance, the project reclaims equipment that was purchased with Medicaid funds and is no longer being used by the recipient. In addition, the project processes donations of gently-used items collected from the
community at all area Goodwill locations. These donated items—
wheelchairs, walkers, scooters, commode chairs, hospital beds (manual
and electric, adult and pediatric), bath and shower assists, canes and
crutches—are sorted, sanitized, repaired and reconditioned. Goodwill
maintains an online database to inventory the full range of available
equipment at [www.goodwillde.org/DME](http://www.goodwillde.org/DME) and has opened a freestanding
retail store at 311 East Lea Boulevard in Wilmington, Del. where the
refurbished medical equipment is sold to the public.

Nichols said Goodwill is also working to identify and expand partnerships
with local assisted living and nursing facilities to make them more aware of
the equipment recycling project. For more information about Goodwill’s
DME refurbishment initiative, contact Project Coordinator Jason Burns at
302-4631465 or at jason.burns@goodwillde.org. Information is also
available on Goodwill’s website at [www.goodwillde.org/DME](http://www.goodwillde.org/DME).

![Ribbon-cutting at DME store, August 3, 2011](image)
To contact DATI’s Central Site office or the ATRC closest to you, call 1-800-870-DATI (3284)
Press
#1 for English or
#2 for Spanish,
then press
#3 for the Central Site office | #4 for the New Castle County ATRC #5 for the Kent County ATRC #6 for the Sussex County ATRC
TDD callers: Do not press #1 or #2 and your call will be answered on a TDD line at the Central Site office.

DATI Equipment Loan Policy

DATI has a wide range of equipment at the Assistive Technology Resource Centers (ATRCs) for the primary purpose of demonstration and short-term loan. The policy for equipment loans is as follows:

The standard loan period is two weeks, defined as the day borrowed (e.g., Monday the 10th) to the same day two weeks later (e.g., Monday the 24th). Loans may be extended provided there are no names on the waiting list and/or that an extension will not interfere with an existing reservation. The maximum loan period is four weeks.

A maximum of four devices may be borrowed during any single loan period. However, combinations of devices may be treated as a single device if the components are interdependent—either operationally or because one component is required for the borrower to use another. Equipment loans
across state lines are not permitted. Equipment must also remain in Delaware throughout the loan period.

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DATI RESOURCE CENTERS THROUGHOUT THE STATE…

800-870-DATI (3284) 
dati@asel.udel.edu

New Castle County ATRC
Alfred I. duPont Hospital for Children
203 Administration & Research Bldg.
1600 Rockland Road
Wilmington, DE 19803
302-651-6790
302-651-6794 (TDD)
302-651-6793 (fax)

Kent County ATRC
Easter Seals Kent County Center
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Delaware Assistive Technology Initiative
Center for Disabilities Studies, University of Delaware
Alfred I. duPont Hospital for Children
P.O. Box 269
Wilmington, DE 19899-0269
Phone: 800-870-DATI (3284) or 302-651-6790
TDD: 302-651-6794; fax: 302-651-6793
Email: dati@asel.udel.edu; Website: www.dati.org

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