



balance

... what it's all about

IN THIS ISSUE



Inclusive Building Design • 7 •



AI and an Accessible Future • 9 •



Charitable Giving • 13 •

Tribute to Dave Symington

By Monica Gartner



How does one start a tribute article when one's heart is broken? Dave Symington was one of my closest friends, a lovely respectful man that encouraged me, and inspired me for over 20 years. He leaves a giant hole in my heart, and in the community.

I first met Dave a few decades ago at a BC Paraplegic Association (now Spinal Cord Injury BC) fundraising event. Dave caught my eye that day. We didn't talk much during our first encounter as he was so popular. Years later, we bumped into each other again. I discovered we share a love for the arts and travelling. He made many road trips down the South and East Coast; he loved going to Hawaii and to England to see his family. Dave introduced me to a few of his other friends, and we met up for coffee to discuss one of our favourite topics: travelling!

We discussed the need for a non-profit organization to assist people with disabilities (PWD) in traveling with a caregiver. Dave agreed, but said, "You run it!" Thus, the Canadian Assisted Travel Society was born, with Dave serving on the board for many years. He was also passionate about addressing sexual health for PWDs, advocating for equality in meeting this fundamental human need.

Over the years, Dave started other non-profit organizations with Sam Sullivan (Vancouver Mayor 2005-2008): Tetra Society, Disabled Sailing, and the Vancouver Adaptive Music Society (VAMS). Through VAMS, Dave and Sam created the band Spinal Cord. Dave loved working with his peers and being involved in all the organizations. He loved the arts and was truly in his element when playing his electric drums or being on stage performing a one-man show.

I am grateful to have known Dave. Yes, I will miss our time together. But I'm also feeling choked: Dave and I made a pact. If we were still single at 80, we would move in together. So, thanks Dave! Who will I move in with now when I reach 80? I will miss you forever.

Monica is an actor, author, writer and speaker.



Technology for Living round up



Ean Price presenting at UBC Okanagan

On May 20, 2024, Ean Price (Innovations Strategist and Peer Team Lead with TFL) shared insights into the assistive technologies he incorporates into his daily life and while traveling abroad during a session with 4th-year engineering students at the University of British Columbia (Okanagan) in Kelowna. He elaborated on how he stores his power wheelchair in a custom-built wooden crate for transport onto aircraft and discussed safety protocols for using a portable ventilator and suction machine during a flight. These technological advancements have revolutionized his ability to travel. In the past, early ventilators were bulky and had limited battery life, making air travel impossible. Ean also introduced the students to commonly used SMART home devices provided by the Technology for Independent Living (TIL) program. The students were deeply engaged and fascinated by the engineering challenges and opportunities.

Seniors & technology

Taylor Danielson, TFL's Community Coordinator, recently delivered an engaging talk to seniors at Century House in New Westminster. The presentation, titled "The Future is Now," showcased some emerging cutting-edge technologies. This marked the final presentation of the peer 'Technology Roadshow for Seniors' series, which was supported by a New Horizons Seniors Project grant. Similar presentations have been conducted in Kelowna, Victoria, and online as part of our WE Talk Tech Senior series. The seniors showed keen interest and actively participated by asking questions about various technologies that could assist them in aging well at home.

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Nicole Whitford, TFL's Community Advisor, offers peer support to residents at Cambie Gardens.

During a recent event on April 18 at Cambie Gardens in Vancouver, residents enjoyed coffee, refreshments and music on the patio. Collaborating with CARMA, CONNECT Partners, and the staff at George Pearson Centre, TFL's Peer Program organizes monthly community gatherings at Cambie Gardens and GPC, with the hope of someday including Dogwood Care Home residents as well. These events play a pivotal role in helping residents forge meaningful community relationships and connections, significantly reducing feelings of isolation. Through these gatherings, we hope to promote an inclusive environment of social interaction and support.



From Right to Left: Nicole Whitford, Mike Rothe, and Heather Morrison

BITS & BYTES FROM TIL

As the pleasant weather arrives, you may feel inclined to spend more time outdoors and reconnect with your community. However, if you're in a wheelchair and can't hold your phone, it presents a challenge. Leaving it in a pocket or backpack could mean not having access to it when needed the most.

That's where TIL comes in! We offer solutions like mounting your phone for easy access, along with assistance in adjusting settings, learning voice control, or installing switch control. With TIL's help, you can confidently explore your community, knowing your phone is accessible when necessary.

CONTACT US!

We are always happy to discuss any member's needs. Simply phone us at
☎ 604.326.0175
or send an email to
✉ info@technologyforliving.org

TIPS & TRICKS

It can be frustrating when you ask Google Nest or Amazon Echo devices to do something, but for whatever reason they have not heard you as they are not responding. Luckily, both devices can play a start and end of request tone, found in the app settings, letting you know when the device starts listening and when its finished. Contact TIL for help with your devices!



Accessible Gaming

By Wayne Pogue

Console gaming has become a significant part of people's lives in recent years. With this trend and the ability to create like-minded communities, TIL has decided it's time to offer support for gaming. We have begun supporting our adult (TIL Program) and youth (YAT Program) members with accessible gaming technology to facilitate accessible, inclusive experiences for PlayStation, Xbox, and Nintendo Switch gaming.

While TIL will not be providing actual gaming consoles or games, we can refer peers to other community partners who are available to help our members discover which consoles/games might work best for their situation. Some of these community partners who are offering support in your gaming journey include "AbleGamers," "Can I Play That," and Neil Squire's "GAME Checkpoints" program.

Once you have chosen consoles and games you'd like to play, TIL can then help you play those games by providing accessible gaming controls, joysticks, and switches.

Xbox Adaptive Controller

The Xbox Adaptive Controller serves as a hub, enabling you to connect various types of accessibility switches and joysticks to your Xbox gaming console. This controller lets you utilize the switches/joysticks you need to replicate any function of a standard Xbox controller.

Additionally, it offers the capability to program different profiles, simplifying the process of switching between games.

Playstation Access Controller

The PlayStation Access Controller functions differently in that it features fewer inputs for programmable switches/joysticks but includes a built-in joystick along with several interchangeable buttons. You can plug up to 4 switches into the controller, providing customization options for switches that better suit your needs. Moreover, the controller offers multiple profiles, making it easy to switch between controller setups for different games. A notable feature of the PlayStation Access Controller is its ability to be paired with another PlayStation Access Controller, allowing you to use 2 joysticks simultaneously and access buttons with both hands.

Hori Flex Controller (Nintendo Switch)

The Hori Flex Controller functions similarly to the Xbox Adaptive Controller, but it is compatible with the Nintendo Switch. Once again, you can plug numerous accessibility switches into it, enhancing the customization of gameplay. Additionally, the Hori Flex allows for the creation of multiple profiles, simplifying the process of switching between games.

INHALE / EXHALE

Iron lung in the news

The American Paul Alexander, who passed away in March 2024 at the age of 78, spent 70 years relying on the iron lung for life support, using this machine longer than anyone else in history. In 2023 Paul was recognised by Guinness World Records as the person who had lived the longest in an iron lung. Currently, there is only one other person known to still use an iron lung in the United States. Initially prevalent during the polio outbreak of the 1940s, iron lungs gradually declined in use as medical technology advanced. Modern respiratory devices, offering greater precision and ease of use, replaced them in clinical practice. Despite their dwindling usage, iron lungs remain a poignant symbol of early respiratory care history.

CONTACT US!

If you need respiratory advice or support please contact the PROP team at
☎ 1.866.326.1245

IDEA CORNER

Indoor air quality

We spend a significant amount of time indoors. Air purifiers are the most efficient way to enhance air quality. Climate change is fueling an increase in forest fires worldwide. Members with pre-existing respiratory conditions are particularly vulnerable to the effect of poor air quality. It is advisable to be proactive and buy a machine.

Traveling with BiPAP: Tips for a Comfortable Journey

By Alex Yu

Plan Ahead

When traveling with a BiPAP machine, early planning is crucial. You may want to inform PROP about your travel plans and keep a copy of your settings just in case it is needed. Additionally, consult PROP for suggestions on portable battery options, which is essential for maintaining therapy during flights or when there is limited electricity access.

Carry-On vs. Checked Baggage

For air travel, it is advisable to carry your BiPAP machine in your carry-on luggage rather than checking it in. Checked baggage can be mishandled or delayed, leaving you without your essential medical equipment. Airlines are accommodating when it comes to carrying medical devices, but it is always wise to check their specific policies beforehand.

Checking In Guidelines

To get through airport security seamlessly, it is essential to familiarize yourself with the transportation guidelines, such as TSA (Transportation Security Administration) in the United States. BiPAP machines are permitted through security checkpoints, but they must be screened separately. Notify the security check agent that you are carrying a medical device and request a manual inspection if necessary to avoid potential damage to your equipment during X-ray screenings.



Power Options

Before you travel, research the electrical outlets and voltages used in your destination country. BiPAP machines typically come with an external power supply that can manage a range of voltages, but you might need plug adapters or voltage converters to ensure compatibility. If you are unsure, consult with PROP.

Portable Battery Solutions

Investing in a reliable portable battery pack is a smart choice for travelers relying on BiPAP therapy. These battery packs allow you to continue your therapy during long flights, road trips, or when access to electrical outlets is limited. Ensure the battery is fully charged before your journey, and if you are traveling internationally, check whether the battery is approved for air travel according to the airline's guidelines. If you are unsure of battery compatibility reach out to PROP

Happy traveling!

Traveling with a BiPAP machine does not have to be stressful. By planning, familiarizing yourself with airport guidelines, and investing in portable battery solutions, you can enjoy a comfortable journey without compromising your therapy. Remember to communicate your medical needs to airlines and accommodation providers, ensuring smooth travel experience that allows you to focus on the joy of exploring new destinations while maintaining your health and well-being.

ASK A PEER

Living with a progressive disability means continually adapting and finding new ways to interact with the world. Assistive technologies like Dragon Naturally Speaking (which I'm using to write this!), my Jaco robotic arm, and tecla-e switch control, are essential tools that help me interact with the world around me in meaningful ways. I'm passionate about helping others explore the potential of assistive technology and find solutions that empower them to embrace their own independence. If you're navigating the world of assistive technology or interested in learning more, let's connect!

Taylor, Community Coordinator

CONTACT US!

We are always happy to discuss any member's needs. Simply phone us at
☎ 604.301.4208
or send an email to
✉ peer@technologyforliving.org

TIPS & TRICKS

Most public libraries in B.C. offer extensive accessibility services for patrons with disabilities. For example, the Vancouver Public Library has a dedicated "Accessible Services" library card, enabling qualifying individuals to access options like home delivery and a reserved collection of digital materials, including e-books and audiobooks.

Summer Adventures with the Disability Foundation Network

By Sheryl Rose Newman

Summer has officially arrived! The excitement is palpable. As a person with a disability, I cherish the opportunities summer brings to explore the outdoors and discover new places. I am eager to embrace the sunshine and enjoy some outdoor adventures. For over three years, I've had the privilege of serving as the Volunteer Management Coordinator at the Disability Foundation Network, and I am taking the opportunity to enjoy our programs and services on offer firsthand.

The Disability Foundation Network, comprising seven dedicated organizations, is committed to removing barriers for people with disabilities, encouraging participants and clients to reimagine what is possible. Our array of programs caters to diverse outdoor preferences.

Adapted Sailing Association of British Columbia (ASABC)

At the Adapted Sailing Association of British Columbia (ASABC), participants can enjoy recreational sailing accompanied by our skilled sailing companions. We also offer instructional sailing and solo sailing experiences for those seeking independent adventures.

British Columbia Mobility Opportunities Society (BCMOS)

Our British Columbia Mobility Opportunities Society (BCMOS) offers many different types of popular programs including hiking, adapted cycling, kayaking, and paddleboarding. Utilizing our renowned TrailRider mobility device, we provide access to wilderness areas that were once challenging to navigate with traditional wheelchairs. From regular

hikes at Pacific Spirit Park to weekend destination hikes at picturesque spots like Cypress Mountain, Stanley Park, Burnaby Lake and Jericho Beach, participants can take part in a diverse range of outdoor experiences.

For water enthusiasts, kayaking and paddleboarding are available at our False Creek Paddling Centre, operating seven days a week. These activities are immensely popular during the summer months!

Disabled Independent Gardeners Association

Our gardening program with the Disabled Independent Gardeners Association, offers a gratifying connection with nature. Gardening can foster relaxation and stress reduction while promoting mindfulness and sensory engagement. With seven accessible community gardens across Metro Vancouver, participants can book raised garden plots for the entire summer season.

All these activities provided by the Disability Foundation Network aim to empower individuals on their unique journey while enhancing their independence and quality of life.

If you're interested in joining any of our programs, we encourage you to register by visiting our website:
<https://disabilityfoundation.org/>
 or contacting us via email at
info@disabilityfoundation.org



Innovative Solutions for climate-affected vulnerable groups

By Amanda Maxwell, Marketing Communications Lead, Praxis Spinal Cord Institute

In 2023, the Praxis Spinal Cord Institute acted in response to the health risks posed by ongoing heatwaves in British Columbia by launching SCI Climate Futures. This initiative aimed to address the urgent needs of individuals with disabilities, such as spinal cord injuries (SCI) and multiple sclerosis, who are particularly vulnerable to extreme heat. The first phase of SCI Climate Futures was a rapid response program focused on providing free cooling devices to eligible individuals across British Columbia. Funding for this project was provided by BC Hydro, and the devices were stored by Technology for Living in their warehouse.

Technology for Living was excited to partner with Praxis on this vital project, delivering cooling assistive technologies to members of the disabled community.

Ean Price, Innovation Strategist & Peer Team Lead

Once applications were received and eligibility criteria were met, the devices were shipped directly to the recipients. In addition to distributing cooling devices, the team at Technology for Living collaborated with manufacturers to ensure the devices met the necessary standards. They also worked alongside Praxis to develop educational materials, including videos and presentations, to help users understand how to effectively utilize the cooling technologies. Thanks to government funding received by Praxis, the program was able to undergo rapid user testing and deployment, ensuring that those in need received support promptly. In its initial phase, the program successfully provided cooling devices to 140 individuals.

The initial program, working with Persons with Lived Experience (PLEX) and conducting organizational outreach, aimed to understand the needs of the spinal cord injury (SCI) community in coping with heatwaves in British

Columbia. It also explored technological solutions, both local and international, that could significantly improve the health and quality of life for people with disabilities, especially those with SCI.

Before receiving this device, there were many times I would want to call 911 because I felt delirious [with the heat] and I was scared.

Paraplegic with T5 AIS D spinal cord injury and traumatic brain injury, leading to cognitive impairment and heightened susceptibility to heat stroke.

In the second phase of SCI Climate Futures, a pitch competition was held to search for innovative cooling technologies. The goal was to develop sustainable strategies that could mitigate the adverse health impacts of heatwaves on individuals with spinal cord injury (SCI) and other disabilities. This phase aimed to identify and promote the adoption of cutting-edge technologies for accessible and sustainable cooling solutions. The competition was won by *Mimic Systems* with their cooling solution.

In light of the 2021 heatwaves and the urgent requirement to assist our most vulnerable, SCI Climate Futures is working to aid British Columbia in readiness and protection against heat dome occurrences. This forward-thinking initiative, which addresses health, equity, and climate justice concerns while prioritizing sustainability, seeks to safeguard the well-being of individuals who are at risk during extreme heat.

FOR MORE INFO:

[https:// praxisinstitute.org/commercialization/praxis-sci-climate-futures/](https://praxisinstitute.org/commercialization/praxis-sci-climate-futures/)

<https://mimic.systems>

Inclusive Building Design

Making Homes Work for Everyone

By Marco Pasqua

What does inclusive building design mean? Inclusive design is about creating spaces that work for people of all abilities. It goes beyond just meeting accessibility codes and slapping on some grab bars. Done right, it seamlessly integrates features that make a home more functional, safe, and comfortable for everyone.

As someone who was born with cerebral palsy and is a manual wheelchair user, it's a concept that hits close to home - literally.

My home office

Voice-activated tech is a game-changer. I can control everything from lights to temperature to curtains with a few words. The Philips Hue smart bulbs (<https://snip.ly/rdbsa5>) and Mysa SMART thermostat (<https://snip.ly/r7slkg>) and SwitchBot Curtain Robots (<https://snip.ly/0lgxur>) (that's right, I said curtain robots) were easy to install, thanks to the support of the incredible team at Technology for Living (TFL). Even better: I was able to receive these supports at no additional cost to me by being a member of TFL's Technology for Independent Living (TIL) Program.

Automatic Door Openers

Many people who consider installing accessible features (especially with wheelchair users in mind) in their home automatically (pun intended) think of automatic door openers. But apart from being expensive, in some cases, like for myself, they may not provide the best solution. However, TIL offers the option of applying for automatic door openers through their Open Door Program (<https://snip.ly/stihlb>), an incredible opportunity for those who need it. (Funded by the Kinsmen Foundation of BC and BC Rehab Foundation).

The nursery

When my wife Karin and I were expecting our daughter Stella, we knew we needed an accessible nursery. Traditional cribs aren't exactly made for wheelchair users. But thanks to an incredible organization Tetra Society (tetrasociety.org), we were able to hack an IKEA

crib, so I am able to roll right under it to scoop up Stella. I may not be able to leap tall buildings, but at least I can look my daughter in the eyes when she plays in her crib. One of my favorite features of this crib is that it includes custom-designed bifold doors that I can lock and unlock with just the use of one hand – which is “handy” as my cerebral palsy impacts my two legs and my right arm. Having this function is the definition of inclusive design. Not only has this been an access win for me, but also for Karin: she doesn't have to bend down to the floor to pick Stella up – why aren't all cribs designed this way?

Inclusive design should not just be considered for those with disabilities – it's a smart choice for people of all ages. When people get older, mobility and dexterity can start to decline. By incorporating features like grab bars, non-slip flooring, and lever handles, we can create living spaces that allow us to age in our own home. No more worrying about that pesky top shelf or slippery bathroom floor. Plus, think of all the cool points you'll score with your grandkids when you show off your voice-activated SMART home.



Increasing home value

Want to boost your home's value? Embrace inclusive design! It has been shown that homes with accessibility features sell faster and at a higher price point than those without. (<https://snip.ly/r1ed2y>) It makes sense – a wider pool of potential buyers means more competition and a

better return on your investment. Not only will you be creating a home that works for everyone, but you'll add value during the process. Talk about a win-win!

Attention landlords and strata councils

Inclusive design matters for you too. By making your rental properties or strata buildings more accessible, you're opening up your doors to a wider range of tenants and owners. You'll also be ahead of the game when it comes to meeting new accessibility regulations. In British Columbia, for example, the Accessible British Columbia Act requires that all new construction meets certain accessibility standards starting in 2024 (<https://snip.ly/iiaxoj>). Get a jumpstart on the competition and make your properties inclusive from the get-go.

Debunking common misconceptions

Myth #1: It's too expensive.

While some features may come with a higher price tag, many accessibility upgrades are low-cost or even free. Plus, you'll be saving money in the long run by creating a home that works for you through all stages of life.

Myth #2: It's ugly.

Gone are the days of clunky, hospital-like accessibility aids. Today's inclusive design features are sleek, stylish, and seamlessly integrated into your home's aesthetic.

Myth #3: It's only for people with disabilities.

Inclusive design benefits everyone – from parents with strollers to seniors with mobility challenges to anyone who's ever struggled with a heavy door or hard-to-reach cabinet.

How to prepare for building an accessible home

The key with inclusive design is to think about it from the start. Retrofitting a home is doable but can be quite costly. Wider doors and hallways, step-free entrances, an accessible bathroom can easily run into tens of thousands of dollars. But if you plan for it in a new build or major reno, the costs don't have to be astronomical.

How do you actually make it happen? For larger projects, it's important to find an architect and builder who understands inclusive design and building an accessible home. The Rick Hansen Foundation offers a training program

called Rick Hansen Foundation Accessibility Certification (<https://snip.ly/stkr63>) for design pros and people with lived experience. I have completed the course myself, and I believe it provides a solid grounding in the principles of accessible and inclusive design.



The Canadian Standards Association's B652-23 Guidelines (<https://snip.ly/m653yuf>) offer great information on accessible dwellings, like minimum door widths, roll-under sinks, ensuring reinforced walls for grab bars, etc. Not exactly light reading, but very useful. Most of these solutions come at little to no cost and just take a bit of creativity and forethought to get the job done.

What if you're not ready to tear down walls

Here are a few small changes that I think can make a big difference:

- › Swap out doorknobs for lever handles
- › Install adjustable showerheads and single-handle faucets
- › Put in some task lighting for better visibility
- › Arrange furniture with wide, clear pathways
- › Say goodbye to pesky throw rugs and hello to non-slip flooring

At the end of the day, inclusive design is really about maximizing independence, safety, and comfort. And who doesn't want that in their home? With a little creativity, and maybe a helping hand from a friend, family member, or local disability service organization, this can become reality. As for me, I'm just looking forward to the day that my Google Home can do my family's massive amount of laundry and folding. A dad can dream.

AI for a more accessible future

By Taylor Danielson with input by Ean Price

In 2023, the world of artificial intelligence (AI) witnessed unprecedented advancements and breakthroughs, marking it as a turning point for human progress. In my opinion, these advancements rank alongside milestones like harnessing control of fire, the development of writing, and the smoke-choked birth of the Industrial Revolution. The artificial intelligence research laboratory, OpenAI, introduced ChatGPT to the world, expanding the ways in which humans can interact with AI systems through written text. Instead of speaking commands or questions aloud, users can type them out, and ChatGPT will generate responses in written form. This innovative approach far surpasses the capabilities of "Alexa" and "Siri".

Don't believe me? Why don't we let ChatGPT 4 (version 4 requires a paid subscription unlike the free 3.5 version) introduce and explain itself? I entered this query: "I'm writing an article about AI and its use for accessibility. I'd like to introduce the audience to an LLM like yourself. Please explain what you are and what you can do in layman's terms in a paragraph or less." Here is ChatGPT 4's response:

I see myself as a massive language learning machine! I've been trained on loads of text and code, which helps me understand and respond to your questions and requests. I can't quite interact with the real world yet, but I can create various types of text, translate languages, and answer your questions in a helpful way. Picture me as a supercharged search engine that can chat with you!

The pace at which AI is advancing is truly staggering, to say the least. Between the time of writing this article and you reading it in this issue of the Balance, I can all but guarantee more momentous breakthroughs or advancement will have taken place.

Rather than grappling with the daunting task of writing an article on the present status of AI, I want to talk to you about the implications, potential, and real-world benefits already available for those of us with accessibility needs. I will focus on the various ways AI has advanced, organizing them chronologically based on the "breakthroughs" that have occurred over the past 18 months.

TEXT

Various text-based AI systems called large language models (LLM's in short) are available from well-established tech companies like Microsoft (Copilot) and Google (Gemini) as well as relatively new up-and-comers OpenAI (ChatGPT) and Anthropic (Claude).

While by no means perfect, these AI systems are capable of high-level, reasonable, and eloquent conversations on countless topics, and can be utilized in myriad ways.

One of the earliest examples I encountered was shared by a person who is working as mentor at a non-profit that helps people with disabilities find jobs. His mentee ran a landscaping and lawn care business but faced challenges in communicating professionally with clients via text. To tackle this, the mentor and mentee teamed up to create a process. The mentee would type his messages into ChatGPT, which would then help turn them into more polished and professional emails before sending them to clients.

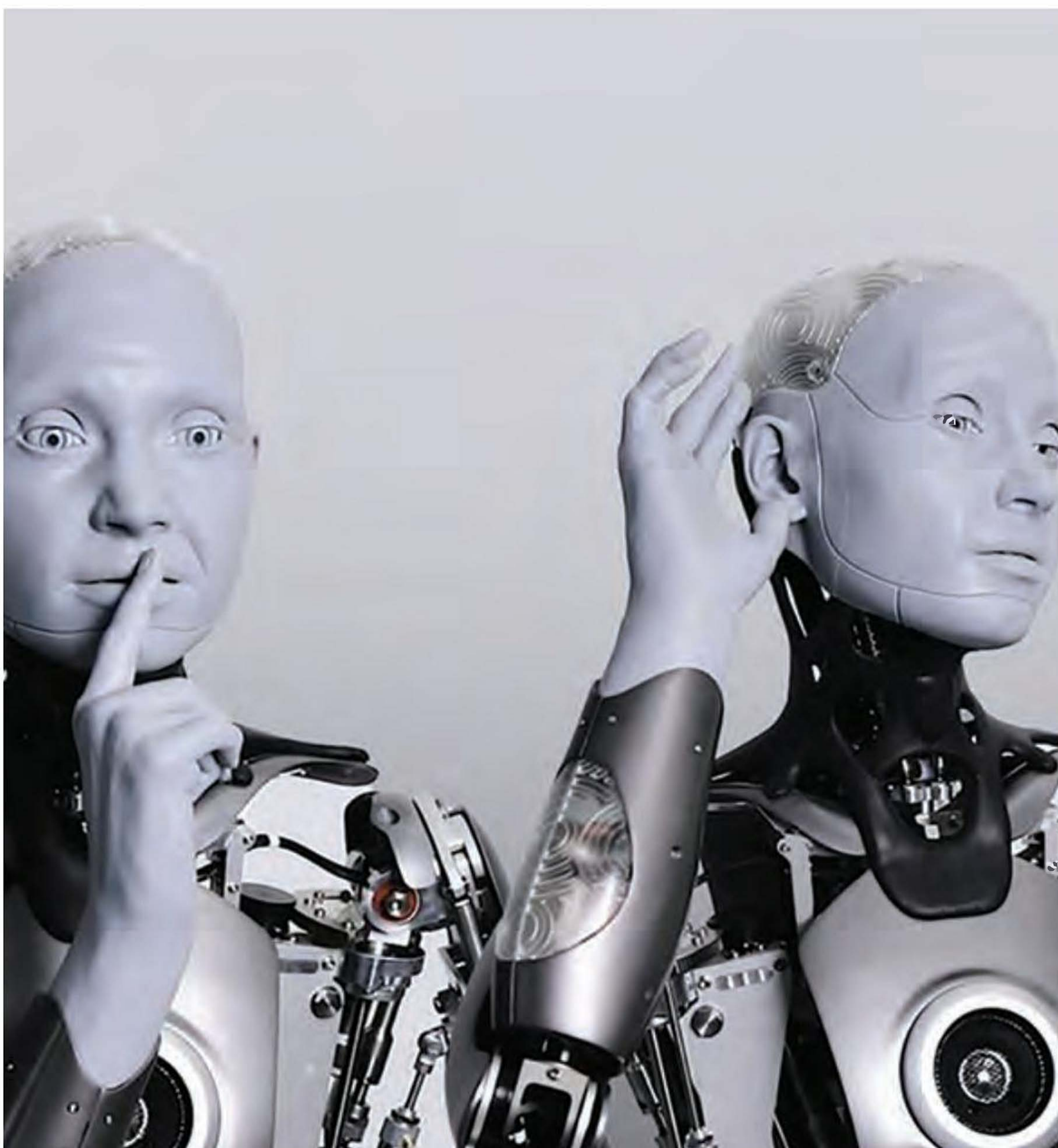
These AI tools are also capable of working in the inverse direction— perhaps if you received a message or communiqué from a nerdy friend (like my friend and colleague Ean Price) and the technical jargon was completely indecipherable. You could take his message and ask ChatGPT (or other available AIs): "Hey, I received this message from my friend. He's a big nerd – I have no idea what he's talking about. Can you simplify it and explain it for a regular person?" It gets better: you could have a whole conversation with this AI, asking follow-up questions, receive clarifications, and ask for suggestions on how you could reply to try to impress Ean with your own technical knowledge.

IMAGES

As AI technology rapidly advanced, text-based systems were soon upgraded to include the ability to work with images. These systems can now recognize and under-

stand the contents of images, as well as create entirely new images based 100% on text commands. For example, you could ask for an image of a unicorn jumping through a doughnut in the style of Pablo Picasso. While generating images from text commands is a huge breakthrough, we shouldn't overlook the practical benefits of accurately converting image contents into text which is especially valuable for people in the blind community or those with vision challenges.

The popular app "Be My Eyes" connects users with vision impairments to sighted volunteers via live video calls. These volunteers describe what they see through the camera to help the visually impaired users. With the introduction of new image-based AI systems, "Be My Eyes" has added a feature called "Be My AI." This feature utilizes the new AI capabilities to enhance the user experience. "Be My Eyes" launched this new feature with a video featuring blind YouTube blogger and TV presenter Lucy Edwards. In one video (<https://snip.ly/18ow2i>), we see Ms. Edwards using this AI technology to identify plants. In other videos she uses this AI enhanced app to describe clothing in a shop, select a drink from a vending machine, providing examples of how this incredible technology has the potential to impact all aspects of her life.



ROBOTICS

This wouldn't be a Balance article written by me, a huge robotics fan, if I didn't find a way to include robotics into the discussion. As of spring 2024, we're beginning to see astonishingly competent humanoid robotic systems taking advantage of the different modalities offered by AI to accomplish a wide variety of tasks. These humanoid robots are using AI to navigate the world without requiring a human operator telling it what to do. A recent viral example shows a human and humanoid robot interacting at a kitchen counter – the human asks the robot for something to eat and is handed an apple which was on the counter. Not only was the robot able to autonomously identify the apple but in a follow-up, it was able to justify why it had done so by stating that the apple was the only edible item among the cutlery, dishes, and other things on the counter. (<https://snip.ly/0nl1hm>)

I believe that robotics is the future of care for people with disabilities and the elderly. To be clear: this is not because I seek a future where human carers are not needed – there simply aren't enough of them available.

Starting with the pandemic, not a week has gone by where I don't hear of someone being short-staffed or struggling to find new employees to fill much-needed care schedules. Countries such as Japan have been innovators for many years now in the space of robotic caregiving due to having the highest proportion of elderly citizens of any country in the world.

AI holds the potential to transform our world in ways we're only beginning to imagine. It's critical that people with disabilities are not merely passive recipients of these changes, but active participants. By working alongside developers, advocating for our needs, and experimenting with these AI tools ourselves, we can help shape a future where cutting-edge technology leads to real improvements in independence and quality of life for all.

Looking back onto the 9th Annual Simon Cox Student Design Competition

By Taylor Danielson

Technology for Living recently held its 9th Simon Cox Student Design Competition at the Blusson Spinal Cord Centre in Vancouver, BC. Our annual signature event invites student teams from across British Columbia's postsecondary institutions to develop assistive technologies that enhance independence for people with physical disabilities. Ideally, the development will involve a collaboration with a peer with whom the student teams work together to allow students to engage with real-world challenges.

This year's competition saw 24 teams from seven different institutions participate. Six finalists presented their projects on competition day to a panel of judges and an audience of over 100 attendees. The day began with these presentations, each a showcase of months of development and dedication. After a catered lunch, a special episode of Technology for Living's We Talk Tech YouTube, hosted by Taylor Danielson at the Rehab Equipment Expo, was screened while the judges deliberated upon the winners of the three prizes. (The peers' award had been chosen a few weeks earlier during a special peer event).

Overall, the event not only showcased student innovation but also brought together community members, peers, industry professionals, and a wide range of supporters of Technology for Living.

Judging the Innovations

Every year the members of our judging panel are composed of people who are truly familiar with assistive technology, bringing a blend of lived experience and technical expertise to the table. Collectively, their insights help determine which projects best meet the competition's criteria of innovation, practicality, and meaningful peer involvement.

Innovative Solutions and Award Winners

UBC Enable took home the Simon Cox Principal Award with their "Wheelchair Obstacle Detection System." This device provides live footage of the area behind the user, complete with color indications of proximity to objects, enhancing safety and mobility for wheelchair users.

UBC M2M was honored with the Achievement Award this year, a tribute to Kinsmen Jim Watson, in recognition of the longstanding partnership between TFL and Kinsmen. "Multiple Sclerosis to Movement (M2M)". Their sensor-equipped glove interfaces with a custom mobile app offers games that facilitate hand rehabilitative exercises, blending therapy with technology.



An "Assistive Knitting Device" by a team from The University of Victoria garnered the Innovation Award. This year's award acknowledged Dr. Jeremy Road (veteran of 20 years+ as Technology for Living's PROP program's former Medical Advisor), and aids individuals in knitting, transforming everyday hobbies into accessible activities for all.





The Peers' Choice Award was dedicated to TFL board member Ken Kramer (TFL Board Secretary and PWD advocate), who sadly passed away in 2023. This year, the peers awarded UBC Enable for their "Wheelchair Obstacle Detection System", making this entry a double winner, highlighting our peer community's appreciation for a cost-effective solution to this common problem.

Peer Involvement at the Heart

At the heart of the Simon Cox Student Design Competition lies the extensive involvement of peers — real people with disabilities who collaborate with student teams not just during the competition but sometimes throughout the entire year. This continuous engagement ensures that the innovations developed are not only technically sound but also genuinely useful to the people who will be using the product or service.

We are looking for peers all year round, asking you to submit challenges and ideas for assistive devices via the competition's website or by contacting us directly. Your contributions are vital as they form the foundation for potential projects that student teams might undertake.

This year, we piloted a special incentive: peers who submit an idea that is selected by a student team for the competition will receive a \$100 gift card. We are in the process of evaluating whether this is something to consider for next year. Our goal is to encourage idea submissions from our peers. Whether it's a mobility challenge at home, a daily barrier, or an accessibility issue in your community: if it's an issue for you, it will be an issue for many of us!

Once a project based on a peer's submission is selected, we facilitate a direct collaboration between the student team and the peer who proposed the idea. As an example, this year a student from Kwantlen Polytechnic University worked with peers to develop a device that allows people

who are using mobility service dogs to independently put the assistive vest on their animals, underlining the innovation possible when student creators and peers collaborate closely from the conceptual stage through to practical implementation.

We aim for these projects to evolve into practical solutions that will make a tangible difference in our peers' lives. Whether you have a specific device need or a broader idea that could benefit many, we encourage you to share your thoughts with us.

Looking to the Future

Plans are already underway for next year's event. We want to take this opportunity to really emphasize the crucial and ongoing importance of peer involvement. As the Simon Cox Student Design Competition continues to grow, we rely on our peers help and ideas to spur future innovations which will benefit all of our community.

The talents of British Columbia's students who took part in the competition were outstanding. At the same time, we saw that collaboration and user-centered design are key to creating impactful assistive technologies.

Over the last decade, the competition has become a beacon of innovation and inclusivity, and we are ready to welcome new challenges and achievements in the years to come.
Be part of it!

Peers! To submit your ideas or get involved, please visit our website at www.simoncoxcompetition.com or email tdanielson@technologyforliving.org.





Charitable giving strategies for your will

By Richard Harrison

I sat down with Rich Widdifield, Senior Financial Planner at Assante Capital Management Ltd. for some tips, as I am revisiting my will and thinking about how I want to be remembered. I'm not overly wealthy but I have more than I expected, and I want to remember Technology for Living in my will.

My reason for wanting to do this stems from personal experience. I had a sister with encephalitis that developed when she was one year old. She was institutionalized, and I never saw her again. I don't want other people with disabilities or conditions to live in institutions as the one and only option. Instead, I want them to have the choice to live in their own homes. I know that a gift in my will can provide help and hope for people with physical disabilities and their families in the future, allowing them to make true choices about their living situations and support. By leaving a legacy that empowers those with disabilities, I hope to make a meaningful difference and prevent others from experiencing the same loss I did.

A charitable bequest is one of the simplest types of planned gifts. Estate planning is an act of care.

It is how we care for our families, support our friends and honour our communities after we're gone. Every single person deserves to exercise agency over the decisions that affect their lives and loved ones.

› By stipulating your wishes in a will, you control what happens to your estate. If you do not have a will, provincial law dictates what happens to your estate

› With a will you know your loved ones will be taken care of according to your wishes as well as knowing you will leave a lasting legacy to a cause that is important to you.

Transitioning from donating out of your regular income to giving from your savings presents an opportunity for people to maximize the impact of their contributions while strategically managing their finances.

The best tax break for people is donating stocks or mutual funds, especially if they have increased in value, **directly** to a charity instead of selling them first and then giving the money. By doing this, people won't have to pay any taxes on the increased value of the securities, which is called the capital gains.

Here's an example: Let's say someone donates stocks worth \$15,000 that originally cost \$1,000. If they were to sell these stocks, they would have to pay taxes on the \$14,000 profit (capital gain). But by donating them directly to the charity, they avoid paying any taxes on that gain.

Additionally, they'll receive a tax receipt for the full market value of the donation, which in this case is \$15,000. This will lower their taxable income so they get a double benefit: no capital gains tax and a tax credit based on the full market value of the donated securities.

Estate planning barriers often prevent people from accessing the tools and resources necessary to safeguard their legacy. To help Canadians get started, the Will Power site (willpower.ca) is a resource to get more information about leaving a gift in a will.

From disabled tech to mainstream

By Roger B. Jones

Everyone living with a physical disability has undoubtedly encountered a technology that has significantly impacted their life. What many may not realize is that a substantial number of these technologies were originally designed for use by people with disabilities, eventually becoming mainstream. Drawing on my own experiences, here are some examples.

The 19th century

Many credit Alexander Graham Bell with the invention of the telephone (1876), but his initial interest in telephony is lesser known. His mother's deafness inspired Bell to experiment with transmitting sound over wires, eventually leading to the invention of the telephone. His father, Alexander Melville Bell, an inventor as well, developed a phonetic transcription system to assist deaf people in learning to speak.

During my first government typing test, I had no idea that the origins of one of the earliest typewriters were tied to a love story. In 1808, Italian inventor Pellegrino Turri created a functional typewriter for his blind lover, who required assistance in composing letters.

Attending career day with my older sister, I discovered that the punch cards used by telephone operators were created by Herman Hollerith in the late 1880s. He later went on to found *IBM*. Some evidence suggests that Hollerith had a cognitive processing disability, which may have influenced his innovative approach to simplifying and automating complex data processing tasks. These punch cards, which processed data more efficiently than previous methods, played a significant role in the development of today's computers.



The 1970 and 1980s

Raymond Kurzweil, an American inventor, has a strong interest in problem-solving for people with disabilities. He advocates for accessibility and inclusion, furthering the development and adoption of technologies to empower people with disabilities, including the *Kurzweil Reading Machine*, *Speech Recognition Systems*, and *Text-to-Speech Synthesis*. In his 1999 book, "The Age of Spiritual Machines," he discusses the capability of computers and their potential to meet the needs of people with disabilities. Music enthusiasts may also be familiar with his long-term collaborations with Stevie Wonder, for whom he specifically created the Kurzweil *K250 synthesizer* keyboard. Many of Kurzweil's inventions have evolved from being focused on disabilities to becoming widely used technologies.

In 1986, I acquired my first "mobile" phone. Its main unit took up the entire space beneath the passenger seat of my van. The wired handset was affixed to the dashboard in front of me and connected to a speaker system, enabling hands-free communication. Cellular phones were rare and expensive at the time. Telephone carriers provided phones to *Canadian Paraplegic Association* staff for quick communication in emergencies, highlighting the significant role individuals with disabilities played in popularizing mobile phones and hands-free technology.

Dragon NaturallySpeaking

In 1982, Dr. James Baker and Dr. Janet Baker introduced *Dragon Systems*, a voice recognition software later known as *DragonDictate*. Following my 1985 motor vehicle accident, I began using *DragonDictate*, which initially

posed challenges with training and limited users to speaking one word at a time on a DOS-based system. However, the development of a continuous speech version, *Dragon NaturallySpeaking*, proved to be life-changing. Initially aimed at people with disabilities, *Dragon NaturallySpeaking* is now utilized across many sectors, including the general public. While other voice recognition software has emerged, I believe that *Dragon NaturallySpeaking* remains unmatched in its effectiveness. Dragon's contribution to popularizing voice recognition technology is undeniable.

Motorized wheelchairs



For many years one of the most common motorized wheelchairs was the Everest and Jennings (E&J) model. It was belt driven, with hard, large back wheels, a basic seating system, awkward controls, and no suspension. Far from perfect but usable. Initially, a lot of healthcare professionals favoured the use of manual wheelchairs for reasons like cost-effectiveness, physical activity, safety, and ease of use and sales of powered wheelchairs remained stagnant for some time. This changed when *Fortress* (now *Orthofab*) emerged with a power base wheelchair, without belts, including a more flexible seating system, a lighting package and travelled at faster speeds. Consumers embraced the new technology and power wheelchair sales surged.

E&J also held a strong presence in the manual wheelchair market, offering robust, metal wheelchairs that were bulky and unwieldy, they were less than ideal for community living. When *Quadra Wheelchairs* arrived on the scene, it revolutionized this sector. Other companies like *Quickie* and *Kushall* began developing new, lighter, and more streamlined designs, which greatly appealed to younger users. Today there are many types of powered and manual wheelchairs, along with related technologies like mobility scooters.

Close captioning

In the 1970s, experiments with encoding led to closed captioning, which displays text on TV screens for people who are deaf. Now, closed captioning is widely used. Video relay is less known, but it helps people who are deaf communicate through sign language on the phone. I believe it's a promising technology that may lead to other discoveries in the future.

Some honourable mentions

Trackball mouse technology originated in the American military during the 1940s and 1950s for controlling radar systems and computers. Despite its military origins, it deserves recognition for its impact. The trackball's precise cursor control, requiring minimal hand movement, made it an ideal option for individuals with disabilities. As these users embraced the trackball mouse, its popularity transcended the disability community, becoming widely used. Other notable technologies deserving mention include touchscreens, GPS, alternate input devices like sip and puff and eye tracking, and screen readers.

If it doesn't exist build it!

Reflecting on my journey, I've come to realize that sometimes the technology we need simply doesn't exist yet. This realization prompted me to establish *World Accessibility*, a company focused on developing technologies primarily for people with disabilities. Much of my time was dedicated to educating corporate and governmental groups through presentations and training sessions. Our work spanned fields, like GPS, software interfaces, video technology, and digital mapping, many of which have since become mainstream. Local entrepreneurs like Gerry Price are also creating products for people with disabilities that that may eventually be embraced by the wider population.

As I sit in my AI-infused home, with *Siri*, *Alexa*, and *Google* competing for my attention, I'm reminded of the progress made since encountering the prototype of the "Butler in a Box" in 1986. While the *Butler* failed to meet my expectations, it represented a step towards the sophisticated devices we rely on today. With the rapid advancements in AI and robotics, the concept of a personal butler feels closer than ever. Technology will continue to evolve, and people with disabilities will remain instrumental in driving innovation forward.

★ Supporting individuals with disabilities fosters a sense of belonging. Play a role by providing autonomy, respect, dismantling barriers, and instilling confidence.

Become an essential part of building a society where everyone, regardless of their abilities, is accepted and given the space to flourish. Join us in shaping a future where inclusivity is not just a goal but a lived reality.

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