ignite thoughts into action

spark

Indiana Governor's Council for People with Disabilities

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FUTURISTIC TECHNOLOGY

spark is a bi-monthly publication of the Indiana Governor's Council for People with Disabilities, an independent state agency that facilitates change. Our mission is to promote the independence, productivity and inclusion of people with disabilities in all aspects of society. This mission is accomplished through planning, evaluation, collaboration, education, research and advocacy.

Suellen Jackson-Boner
Executive Director

Christine Dahlberg
Deputy Director

Two years ago, at the Governor's Council's annual Conference for People with Disabilities, futurist Glen Hiemstra provided us a glimpse of the unique challenges and opportunities we face in our growing digital world.

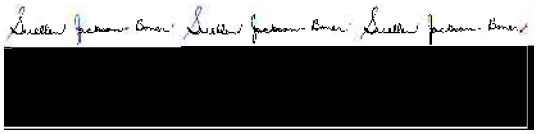
Opportunities abound for both our aging population and for people with disabilities. I clearly remember his parting challenge, "Be willing to invent the future!"

Invent is a strong word. With it, Hiemstra was challenging all of us to create or design something new and visionary. There are many creators and innovators among us, and that is why our world is filled with amazing and promising new technologies. The scientists of our day have truly made the world a more interconnected, limitless space where we can achieve what was previously unthinkable.

In this issue of Spark, we've compiled many examples of inventions and visionary thinking that will set the stage for the future in health care, arts and education, and our personal lives. These scientists, researchers and people like you have embarked on the challenge of inventing the future. Through their efforts, they're helping everyone – not just people with disabilities – become more independent and able to further contribute to their communities. We will expand more on this concept in our 2013 Dream to Dare Conference December 3 and 4 in Indianapolis.

Just like Glen Hiemstra, I invite you to take this challenge: Dream, dare to take action, and be willing to invent your future!

Sincerely,



Suellen Jackson-Boner
Executive Director

The smart life: A look at new lifestyle tech

Don't be alarmed if your next home, car or article of clothing is smarter than you are. New lifestyle technology is heading in a direction that may eventually be two steps ahead of you, making your life a lot more "user-friendly."

Smart houses

Home automation is growing tremendously. Houses used to be constructed for people to maintain, making it difficult and costly to adjust to their needs. Now, homes can be wired to meet the needs of the people living in them. Smart home technology has the ability to know the homeowner's needs, preferences and daily habits and automatically make adjustments using specialized electronics installed within the home. Thanks to the digital revolution, new developments to electronically control almost any home device are coming to the market regularly.

Many houses are already starting to come equipped with smart devices. For instance, some innovative thermostats can automatically detect when a person is traveling home from an evening commute and set the perfect temperature for when the homeowner walks in the door. Instead of waiting for a hot shower, a water heater can automatically set itself to the correct temperature before you even open the shower curtain. Sensors turn lights on or off in occupied or unoccupied rooms, and blinds open or shut themselves depending on the time of day. Alarm systems can even be switched on using voice activation or a smartphone, while televisions can switch to the owner's preferred station when a favorite program is airing. Some home applications can even landscape, water yards, mow lawns, vacuum rooms and clean pools automatically. The possibilities are endless.

Two smart homes – the Gator Tech House at University of Florida and the Duke University Smart House – have been equipped with sophisticated intelligent systems

Smart home technology has the ability to know the homeowner's needs, preferences and daily habits and automatically make adjustments using specialized electronics installed within the home.

that create assistive and supportive environments. According to a 2013 journal article in Renewable and Sustainable Energy Reviews, the developers' goals were to introduce useful home tools that could elevate and enhance quality of life for people who are elderly or have disabilities. Some of the smart features of these houses include:

- **Laundry** – notifies a user when a load needs to be washed.
- **Closet** – categorizes and proposes the best attire for the weather forecast.
- **Mirror** – notifies the user about bodily health.
- **Bathroom** – flushes toilet, restocks toilet paper, sets bath or shower water temperatures and self-cleans automatically. It can even monitor the cleanliness of the user.
- **Bed** – senses the sleep patterns of users and adjusts itself throughout the night.
- **Floor** – tracks movement and location of house occupants and reports emergencies if someone falls down.
- **Stove top** – uses heat-free magnetic induction cooking.
- **Countertop** – adjusts to the height of the user.
- **Front door** – observes and identifies visitors.

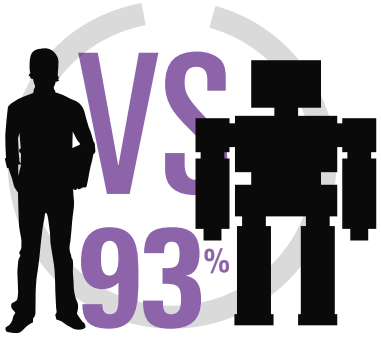
There are many other smart houses on the market and across the United States. Many smart homes for people with disabilities have been built by organizations like the Gary Sinise Foundation. Sinise, the actor who played Lieutenant Dan in the movie "Forrest Gump," co-sponsors "Building for America's Bravest," a program that builds smart houses for veterans with disabilities. According to his website, garysinisefoundation.org, houses feature retractable cooktops, cabinets and shelving; automated lighting, heating and air conditioning; window treatments controlled by an iPad; elevators; roll-in bathrooms; front-load washers and dryers; intercom systems and automated doors. Other organizations around the country, like Living Resources, an Albany, N.Y.,-based agency serving people with intellectual and developmental disabilities, are setting up "barrier-free" smart homes that house up to six residents and include many of the same automated controls, open floor plans conducive to wheelchairs and telehealth equipment to monitor residents' well-being.

Cars of the future

Cars are getting smarter, too. Back in 2008, futurist McKinley Conway predicted in this decade, interstate highways will feature lanes for cars and trucks controlled by computers. World Future Society writes about Conway's thoughts: "Robo-cars (small vehicles completely controlled by built-in artificial intelligence) will pick up elderly people [and people with disabilities] in residential areas and take them to nearby supermarkets, doctor's appointments, and wherever else they might like to go."

According to a 2013 report from Navigant Research, smart city technologies, such as coordinated traffic signals and smart parking, are already setting the stage for the arrival of autonomous vehicles in

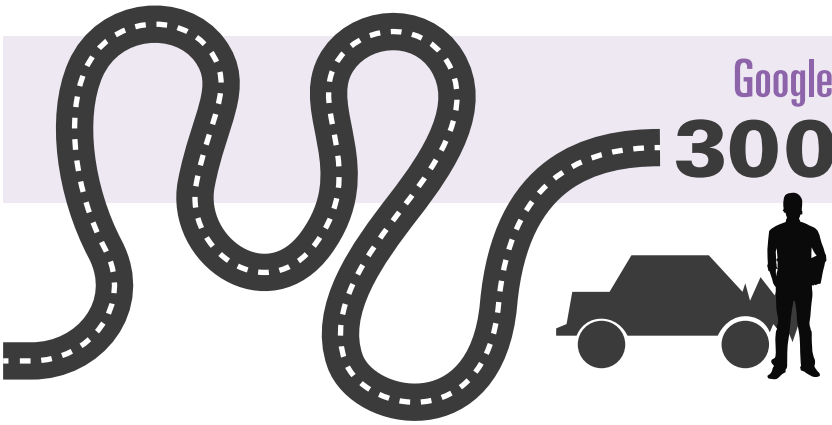
By Steve Jurvetson [CC-BY-2.0 (http://creativecommons.org/licenses/by/2.0)], via Wikimedia Commons



Annually, car crashes cost the US

$160,000,000,000

and are the leading cause of death for 4- to 34-year-olds



Google's driverless cars have logged

300,000 MILES

1 ACCIDENT

(a human driver was in control)

the future. Cars that are tuned into the public infrastructure in this way will reduce congestion and cut down on fuel use.

Recently, Japanese automaker Nissan announced it is on track to mass produce autonomous vehicles by 2020 – and at reasonable prices for consumers. Autonomous vehicles may prove game-changing for the automotive industry. According to FutureTimeline.net, features like collision avoidance will be able to react more rapidly and with more complex movements than a human driver. Today, 93 percent of car accidents are due to human error, and crashes cost the U.S. $160 billion and rank as the leading cause of death for 4- to 34-year-olds. Autonomous cars also mean true mobility and independence for the aging population and people with disabilities. Navigant's report states popularity for the cars may translate into sales of more than $100 million annually by 2035.

> **"Robo-cars will pick up elderly people [and people with disabilities] in residential areas and take them to nearby supermarkets, doctor's appointments, and wherever else they might like to go."**
>
> -World Future Society

Google is also ahead of the game and has been testing its driverless car in states where they are permitted – California, Florida and Nevada. Reported by PBS Newshour on May 13 of this year, Google's driverless cars have logged more than 300,000 miles. Only one accident has been reported; it happened when a human driver was in control of the vehicle.

Lifestyles of the future

Syncing your life to the digital age may bring more efficiency, safety and functionality to your daily living. The impact these technologies bring into our lives is far-reaching, and it could be the first step toward living a well-connected, independent lifestyle. ✳

Today's medical technology breakthroughs making the future brighter

Six years ago, doctors told Becky Rivera's husband she had a 5 percent chance of living. If she did live, she'd be in a persistent vegetative state. The news came immediately after she suffered a pseudo aneurysm that left the entire right side of her body paralyzed – just five days after her youngest son was born.

However, fast forward six years and Rivera, an Indianapolis native, has regained her memory, speech and the ability to walk. Moreover, within the last three months, she has begun to have motion in her right arm again thanks to a device her therapist introduced to her – the SaeboFlex.

"My son has never known me not to be paralyzed. I want him to see me accomplish something, so he knows the impossible is possible in life. I think the SaeboFlex is going to do that for me," Rivera said.

Saebo, Inc., the company behind the device, is a leading global provider of innovative rehabilitation products for stroke survivors and other individuals with neurological disabilities. Rivera was fitted with a SaeboFlex that gives her weakened hand, wrist and fingers support during therapy. The SaeboFlex does not use electricity – it is purely mechanical. The website explains, "Saebo's pioneering treatment principles are based on the latest advances in neurorehabilitation research documenting the brain's ability to 're-program' itself through mass practice, task-oriented arm training."

During therapy, the custom-made device slips on Rivera's hand, and she uses her brain to communicate with the glove to enable movement of her arm. Although she does not have complete movement, with her mind she can send messages to her fingers to grasp an object, direct the arm toward a position and release her fingers from the object. She practices several times a week moving various objects to incremental heights. And in three months, she feels extremely accomplished.

"Before long, I know I'm going to be able to go out and throw the football with my son, teach my daughter how to braid and pick up my cup of coffee," Rivera proudly proclaimed.

Mind control

If you thought Rivera's success was intriguing, you might be interested in electroencephalography (EEG) — the detection of electric currents produced in the brain when we want to move our bodies.

Bin He, a professor from the University of Minnesota, has created an EEG skull cap that,

when placed on the head, allows the user to control a toy helicopter using only his mind. Researchers are hopeful it can be used by individuals who are paralyzed or limited in motion. And engineers seem to be most excited that it is non-invasive – it does not require any drilling into the brain.

In a June 2013 report by CNN, He said he believes this technology will soon be used to control wheelchairs, artificial limbs or other devices. "[The discovery] holds promise for people with [conditions] like autism or Alzheimer's disease and helps people with strokes recover."

He's research was funded by the National Science Foundation.

Human intention

In addition to mind control, researchers have discovered they are able to predict a person's bodily movements before they happen. Through neuroimaging – real-time visualizations of a person's brain – scientists at the University of Western Ontario could see more blood flow into certain pockets of the brain when patients considered grasping an object. The World Future Society believes this breakthrough can aid in the formation of prosthetics that respond to and return signals to the brain and act more like actual limbs.

Brain stimulation

Another "brainy" device literally shocking patients is the portable neuromodulation simulator (PoNS). Scientists have discovered certain nerves on the tongue can be stimulated to send signals to the brain. According to Popular Science, the device is given to a patient to bite down on while completing 30 minutes of physical and cognitive exercises. PoNS shocks the nerve endings on the tongue and helps the brain repair disconnections that may have resulted from traumatic brain injuries, alcoholism, Parkinson's disease, strokes or multiple sclerosis. The device was funded in part by the U.S. Army with the hope of treating wounded soldiers.

Cochlear implants

The advances to assist people with hearing disabilities have also been profound, thanks to the cochlear implant. In September, the scientists behind the research and development of this medical device were awarded the prestigious Lasker Award, one of the most respected science prizes in the world. Today, more than 300,000 people with moderate to severe hearing loss use a cochlear implant.

According to an Oct. 5, 2011, article from Mashable.com, sometimes hearing loss is associated with weakened or missing small hairs in our inner ears. These hairs stimulate auditory nerves that communicate with the brain, allowing us to register what we hear. Cochlear implants are mini-computers that rest behind the ear and act as microphones. The device transfers a digital signal to an implant inside the head. Then, the implant directly stimulates the auditory nerve, taking the place of the small hairs.

Another revolutionary procedure also took place this June in Charlotte, N.C. Three-year-old Grayson Clamp was born without the auditory nerves that carry sound to the brain. Without the nerves, a cochlear implant would not work for him. Instead, Grayson was given an auditory brainstem implant – something performed on adults, but never on children. According to CNN, in this procedure, doctors directly place a microchip on the brain that can read digital auditory signals. Footage of Grayson shows his initial reaction to hearing his dad for the first time, and it gained major national and international attention. You can view the video at bit.ly/11pqhd0.

Bionic glasses

From ears to eyes, in February the FDA approved the first kind of implant that works to restore some sight to people with retinal pigmentosa (gradual blindness). According to ABC News, the implant, named Argus II, takes images from a video camera installed in specialty glasses and wirelessly transmits them to the brain. The device does not restore vision, but it allows users to "detect light and dark in an environment." If it gains more success in the market, it may be used to assist many other people with vision disabilities.

3-D printing

According to Forbes, one of the most "broadly applicable" technologies

that could revolutionize health care is 3-D printing. Already used in a variety of industries, it has become a quick and relatively cheap way to make customizable parts. Markus Fromherz, chief innovation officer in health care for Xerox, believes 3-D printing can be applied to the health care industry in three categories: scaffolding, medical devices and human tissue.

In the Forbes article published in August, Fromherz talks about scaffolding as a way to transform joint replacements. "Knee replacement is a very common procedure; there are six or so different types of knees that doctors use. But with each one, you need to cut the bone differently." Using 3-D printing, doctors can design a new knee specific to each patient, eliminating the need for doctors to cut into bone to lose extra inches. Custom-made knees and other joints could "lead to faster recovery times and better functionality."

When doctors need to create a medical device specific to a patient, 3-D printing has already proved helpful. It has transformed the dental industry, as crowns and dental implants can be made while patients wait. Similarly, most hearing aids are already largely manufactured with 3-D printers. Further benefits will become apparent when doctors need to print on demand. Smithsonian.com reported doctors used a dissolvable 3-D-printed splint for a newborn's collapsing trachea and saved his life.

Finally, scientists have been working to find ways 3-D printing can be used to create human tissue. The challenge is making the tissue functional. As scientists continue theorizing and testing solutions, in the future we may see 3-D printers creating blood vessels, skin and even functioning stem cells.

Becky Rivera using the SaeboFlex in her home.

Monitoring systems

Mobile technology has revolutionized the way patients can monitor their health from the comfort of their own homes. In his book, "The Creative Destruction of Medicine," Eric Topel, M.D., describes technologies available today that can provide personalized health information through wireless devices, and smartphone and tablet apps. Patients can monitor blood glucose levels, blood pressure, brainwaves and virtually every type of physiological information. Even more, as sensors and transmitters become smaller in size and are embedded into our bodies, doctors and health care officials may be able to monitor, collect information and diagnose patients remotely.

Whether doctors want to give this much power and responsibility to the patient is still a debated question among medical health experts. Concerns over patient self-diagnoses, along with privacy of the patient, keep this technological breakthrough from going mainstream. However, the revolution in data collection may help the transition from population-based medicine to individualized medicine. It can even reduce the cost of health care, since data can be transmitted by the patient directly to the doctor or hospital.

These advances in medical technology keep us moving forward. Like Becky Rivera, researchers keep pushing the limits of impossibility and provide a fascinating look at what might come next. ✳

Wheelchair technology keeps moving forward

Are you curious to know what's in store for the future of wheelchairs? Cruise through these new developments coming to market soon.

Urban climber

Researchers at the Chiba Institute of Technology in Tokyo have developed a wheelchair better suited for unpredictable urban terrain. The four-wheel drive, five-axis wheelchair is equipped with sensors that can detect its surroundings. The chair intuitively senses an obstacle – steep ramps, uneven sidewalks and other barriers – and adjusts itself to climb over them. It can even conquer stairs! In addition, the chair was engineered so the seat remains steady as it maneuvers. Currently, public testing of the wheelchair is taking place to fine-tune the user experience.

Stand up or sit down

Matia Robotics (matiarobotics.com) is now taking reservations for an unprecedented wheelchair supplement, TEK. TEK is a robotic device allowing individuals with paraplegia to do many day-to-day activities standing up. Users can be supported upright, navigate tight spaces and move at eye level through most environments. It is equipped with a weight-balanced suspension system and has many stabilization points to keep the user secure. The device will cost about $15,000 and will be available in the U.S. by the end of this year.

This wheelchair prototype can climb stairs!

RoboDesk

Developed by Purdue engineering professor Brad Duerstock, Ph.D., the RoboDesk is a mechanical, electronic arm built with a custom, handy tray. The tray acts as a desk or becomes a mount for computer tablets or other devices. When the arm is not needed, it folds down to the side of the wheelchair without making the chair wider. Perfect for the classroom or the work cubicle, the tray also swivels and can be adjusted to any height or proximity to the user. Go online to see a video of the device in action at youtu.be/GehfR-exObc. ✳

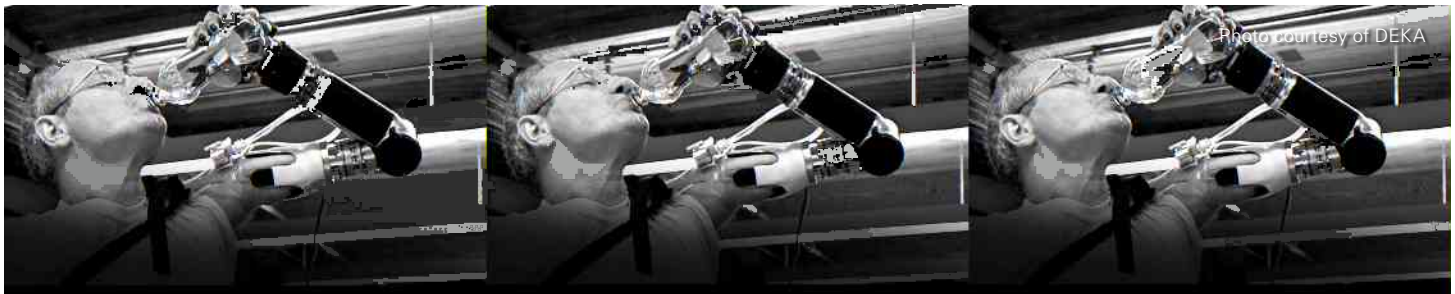


Photo courtesy of DEKA

The robot helped me do it!

Making the seemingly impossible possible – that's the goal the scientific and medical world embraces in robotic technology. More than ever before, robotics are assisting people with disabilities in completing daily life tasks or helping them learn new skills. How? Today's medical robots have been manufactured to mimic natural human abilities.

Exoskeletons

Claire Lomas made national headlines when she became the first person with paraplegia to walk the London Marathon in 2012. Through the use of an assistive robotic suit worn around her legs, she was able to walk the full distance, one step at a time, in 17 days.

Robotic suits worn on the body can help joints and muscles move and allow people with lower body paralysis the ability to walk upright. Reported in May, CNN.com stated the ReWalk – the device Lomas used – already has 220 users worldwide. And Ekso Bionics' wearable robot, ReWalk's competitor, has helped people with paralysis walk more than 1 million steps.

"In the next five years we're going to see more and more exoskeletons out there in practice," Thomas Sugar, associate professor at the Department of Engineering, Arizona State University, told CNN.

Earlier this year, Japanese robot maker Cyberdene introduced HAL to people with muscle weakness. HAL, or hybrid assistive limb, is a metal and plastic apparatus that connects to a person's arm or leg. The exoskeleton is able to detect muscle impulses, anticipate the movement of the wearer and provide him or her with support in walking. It can also assist hospital personnel when lifting patients.

Sugar points out, while the technology is growing rapidly, improvements are still needed to make the exoskeleton robots appropriate for everyone. Batteries that are powerful enough to fuel an exoskeleton's motorized joints remain a major stumbling block. Sugar also believes the largest obstacle will be making sure the device can effectively and fluidly interpret the user's intent and turn it into action.

"If you look at some of the devices out there, they're actually quite hard to walk in," Sugar said. "You've got to make sure they really enhance people's abilities."

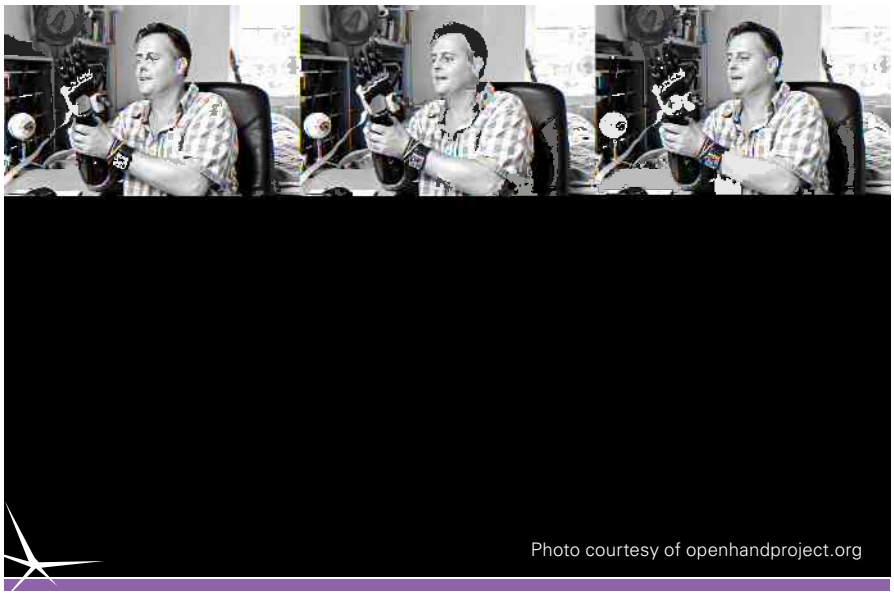
Prosthetics

Robots can also take the place of the body's limbs. One of the most advanced robotic prosthesis is known as "Luke," named after the famed Luke Skywalker from Star Wars. Funded through a

grant from the U.S. Department of Defense's research section, Luke began at DEKA Research and Development as a robotic arm for wounded military soldiers. Now, Mashable.com states it's "a highly sophisticated, highly functional" prosthetic arm engineered to be so precise it can peel a grape. Its components were customized to be agile, modular and less than eight pounds.

The arm can be controlled by nerves, muscles or foot petals, and Luke is advanced enough to be attached to the arm at any point – shoulder socket to hand. It also sends vibrations to the user to identify how much grip is being applied.

Another company, Joel Gibbard's Open Hand Project, is an initiative aimed at developing a fully functional robotic hand, called Dextrus Hand, for people with arm amputations or undeveloped limbs. Using the same technologies as other advanced prostheses, the difference is its affordable cost. According to TechCrunch.com, creator Joel Gibbard is hoping, through the use of 3-D printing and other low-cost sources, he'll be able to deliver this prosthetic for approximately $1,100. The Dextrus Hand picks up electrode signals from the user's muscles, and as it does, the hand reacts and is able to execute the movement the user wants. The Dextrus Hand is engineered with sensors, allowing it to grasp delicate objects without breaking them or apply enough strength to hold heavier objects.



Chef Liam Corbett lost his hand to meningitis two years ago and is helping to test the Dextrus hand. For more information, visit openhandproject.org.

Personal aids

Many people might remember George Jetson's robot, Rosie, in the 1970s futuristic animated series The Jetsons. Researchers in Silicon Valley are currently making today's version of Rosie – a personal robot capable of helping users fold laundry, shave, get a towel or scratch an itch. FuturisticNews.com believes this technology will be empowering for people with quadriplegia or paralysis and will help older adults feel more independent and rely less on a caretaker.

Depending on the sophistication of the device, personal assistant robots can be controlled using computer applications or mind-power. Most of today's robots that appear in classrooms (see page 12), in factories and homes are powered by an electronic device. To assist people with limited brain function, scientists have discovered ways to make robots react to brain signals and perform tasks the user only needs to "think" about accomplishing. BrainGate2, a clinical trial conducted by Brown University researchers, was very successful in 2012 when a woman with paralysis was able to steer a robot to pick up a bottle of coffee and move it to her lips using neural implants. According to Nature.com, the next round of trials has incorporated DEKA's robotic Luke arm.

Robotics will only continue to advance and bring more assistance to people with disabilities. In 2011, the Obama administration created the National Robotics Initiative to highlight and advance the critical role robotics will play in human assistance. In 2012, the initiative, led by the National Science Foundation, the National Institutes of Health, the National Aeronautics and Space Administration, and the U.S. Department of Agriculture, provided $50 million in grants to developers of this technology. From this initiative, these developers hope to create robots that change everyone's life for the better. ✳

Innovation in arts and education

Today's technology has renewed our creative spirit and revolutionized our personal learning in many ways. With countless innovative products already on the market, these amazing tools can help us express ourselves in ways we never thought possible.

Tablets and e-readers

Tablets and e-readers have paved the way for learning since their introduction in 1999. In less than 15 years, these digital devices have made it possible to shape, size and restructure traditional media for easier consumption. Such functions include:

- Text-to-speech, speech-to-text
- Haptic (mechanically stimulated) images
- Flexible on-screen images and text
- Intuitive memory capabilities

Tablets and computers with these functions have helped classrooms move beyond the traditional lecture environment and foster more supportive, instructional learning. This transformation in learning is described in an article, "The Future is in the Margins: The Role of Technology and Disability in Educational Reform," commissioned by the American Institutes for Research on behalf of the U.S. Department of Education, Office of Educational Technology.

"It will be routine to assume that while many students will write (or type) their essays, there will also be alternatives that involve rich mixes of writing, illustrating, speaking, video-making, and drawing […] Evaluation will be sensitive to purpose, audience, and the strengths of the learner."

The classroom robot

In Splendora, Texas, Cristian Beasley, a sixth-grade student diagnosed with acute lymphoblastic leukemia, was instructed to not attend school during a critical point in his chemotherapy regimen. Instead, thanks to new technology, Beasley was able to send a robot – acting as himself – in his place.

Whether it's an extended illness, injury or a disability, not every student can safely attend school. When school districts are faced with situations like this, alternative methods, like VGo Communications' robots, are now being introduced. According to the New York Times, more than 50 students across the country are using remote presence robots.

The technology is still expensive, costing $6,000 with an additional $1,200 a year for maintenance.

But, Maja Mataric, a computer science professor at the University of Southern California who studies how robots help children with learning disabilities, predicts, "Soon these robots should be the price of an inexpensive laptop." Despite the cost, advocates say these robots are valuable alternatives to tutoring and should make access to education easier for students who are recovering from an illness or injury.

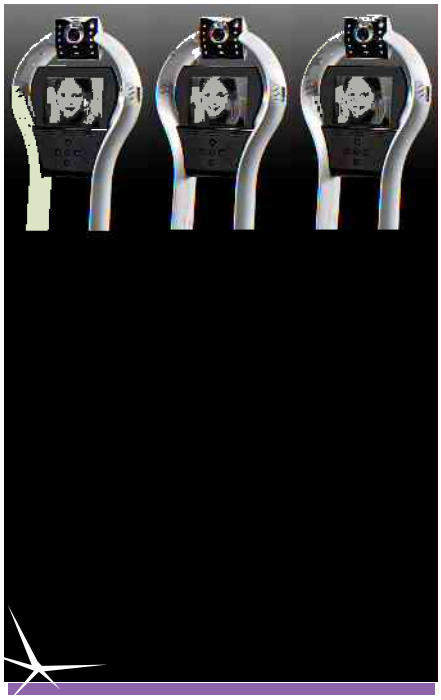
As stated on their website, vgocom.com, "VGo…enables a person to replicate themself in a distant location and have the freedom to move around as if they were physically there." Students, like Beasley, are able to drive the robot remotely and use a web camera to see and hear teachers and fellow students. Conversely, a video screen at the top of the robot allows the student to be seen and heard in his or her classroom. Students using VGo can roam the halls between classes with friends, socialize at lunch and feel part of the school environment miles away from a classroom.

"There are no longer boundaries between them and the world that was previously inaccessible."

Drawing with your brain

According to ScienceDaily, a team of researchers at Royal Holloway, University of London, is working with charity SpecialEffect to use innovative technology to design a computer program allowing people with disabilities to reveal their creativity using their eyes.

ScienceDaily explains, "Having identified a tell-tale pattern of eye movements which allowed them to predict the participant's



Classroom robots, like VGo, help students who are ill attend school.

preferences, the researchers developed an evolutionary algorithm to manipulate designs right before the subjects' eyes, so that they gradually evolved to match each person's preferences."

The experiment hopes to expand the program into a virtual application giving users with disabilities the ability to draw with their minds.

Google Glass

After a car accident in the 1990s caused her paralysis, San Francisco native Tammie Lou could no longer enjoy her passion for photography. That is until she heard about a new technology Google is producing.

"Google Glass" is a revolutionary concept that would function like a pair of lens-free spectacles, but allow users to operate a variety of tools. According to the website, google.com/glass, "It's surprisingly simple."

- Say "take a picture" to take a picture.
- Record what you see. Hands-free.
- Share what you see with your friends online. Live.
- Get directions right in front of you.
- Speak to send a message.
- Ask whatever's on your mind.
- Translate your voice to another language.

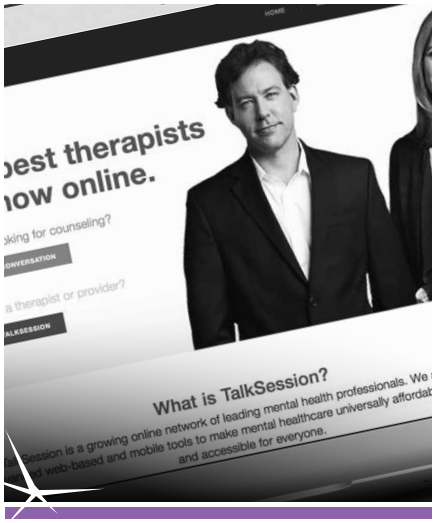
Many people have said Google Glass is a life-changer. Although it is not for sale yet, many individuals – including Lou – are looking forward to the product hitting the market soon.

Lou told ABC News how she had to rely on family and friends to take her pictures; however, the pictures never turned out quite the way she imagined. After learning about Google Glass, she entered her name to be a tester for the new product hoping it would enable her to gain back her artistic photography skill. "It just opens up a whole new world that you just can't even imagine," Lou said.

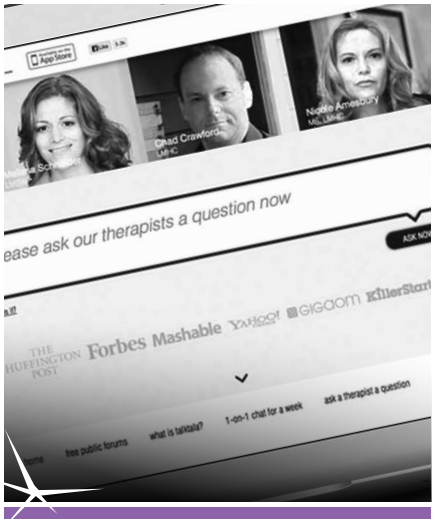
What other technology products would open up new worlds in arts and education? With a little creativity, your ideas may become the innovations of the future. ✳

From couch to computer: trending toward telemental health

iCouch hopes to make online therapy easy.



TalkSession provides an online network of mental health professionals.



Talktala offers free public forums to ask questions.

A recent study by Case Western Reserve found many new moms did not seek help for postpartum depression because of the stigma or lack of time; however, they would go online if they could communicate with a provider privately. If you've shared these concerns and avoided seeking psychiatric help, you are not alone.

New telemental health programs are working to break down the barriers of fear, shame and inconvenience when people need psychiatric therapy. Online services make it easy to connect with a therapist in a secure online portal, in the comfort of your own home and on your own time. Several startups are already leading the way.

iCouch (secure.icouch.me) allows users to search for "the perfect therapist," schedule a session and connect via high-quality video in a secure setting. Or, the iCouch iPhone app provides basic advice about training your emotions.

In partnership with GE and StartUp Health Academy, TalkSession.com is an online network of mental health professionals who are expertly matched to a patient based on compatibility of personalities, experiences, philosophies and values. After a double-referral process, therapists help patients talk through their issues, and patients can feel comfortable they are paired with someone who understands them.

Other sites include Talktala.com, an open forum categorized by subject matter and moderated by a certified therapist, and TelementalHealthComparisions.com, a site that lets you compare different telemental health sites to gauge which service is right for you.

If these portals continue to prove safe and secure, it may be the new normal in this important, but often downplayed, health field. ✳

Technology resources

Indiana Assistive Technology Act (INDATA)

eastersealstech.com
(888) 466-1314
tech@eastersealscrossroads.org

As a partnership between Easter Seals Crossroads, the state of Indiana and the Bureau of Rehabilitative Services, INDATA's mission is to increase access and awareness of assistive technology. Core services include: information and referral, funding assistance, public awareness and education, device demonstration, device loan, reutilized computers and equipment reutilization.

Purdue Center for Paralysis Research (CPR)

vet.purdue.edu/cpr
(765) 494-7600
cpr@purdue.edu

CPR develops and tests treatment methods for spinal cord injury and the effects of paralysis.

Indiana AgrAbility (Breaking New Ground)

engineering.purdue.edu/~bng
(800) 825-4264
bng@ecn.purdue.edu

Funded by the U.S. Department of Agriculture, Breaking New Ground offers resources to help farm worksites, homes and rural businesses increase accessibility. The program provides worksite assessments, recommendations for modifications, advocacy, trainings and case management.

EurekAlert.org

This website keeps tabs on breakthrough science and technology news from a variety of research sources. You can view new advancements in subjects ranging from agriculture to astronomy. The site is fully compliant with ADA-accessible web guidelines.

Trace Research and Development Center

trace.wisc.edu
(608) 262-6966
(608) 263-5408 (TTY)
info@trace.wisc.edu

Since 1971, Trace has been a significant contributor for universal design of information and telecommunication technologies, making them more accessible for and usable by people who are elderly or have disabilities.

Alliance for Technology Access (ATA)

ataccess.org
(731) 554-5ATA (5282)
(731) 554-5284 (TTY)
atainfo@ataccess.org

The mission of the ATA is to increase the use of technology by children and adults with disabilities. Through public education, information and referral, capacity-building in community organizations, and advocacy/policy efforts, the ATA enables millions of people to live, learn, work, define their futures and achieve their dreams.

Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)

resna.org
(703) 524-6686

Starting from a group of a few dedicated members, RESNA has grown into the premier organization for professionals and researchers with the common mission of maximizing the health and well-being of people with disabilities through technology.

National Institute on Disability and Rehabilitation Research (NIDRR)

ed.gov/about/offices/list/osers/nidrr
(202) 245-7640 (TTY)
nidrr-mailbox@ed.gov

NIDRR, a component of the U.S. Department of Education's Office of Special Education and Rehabilitative Services, is the main federal agency that supports applied research, training and development to improve the lives of individuals with disabilities. The Institute provides grants and sponsors research to aid the development of technology that enhances life and learning for people with disabilities.

Indiana Governor's Council
for People with Disabilities

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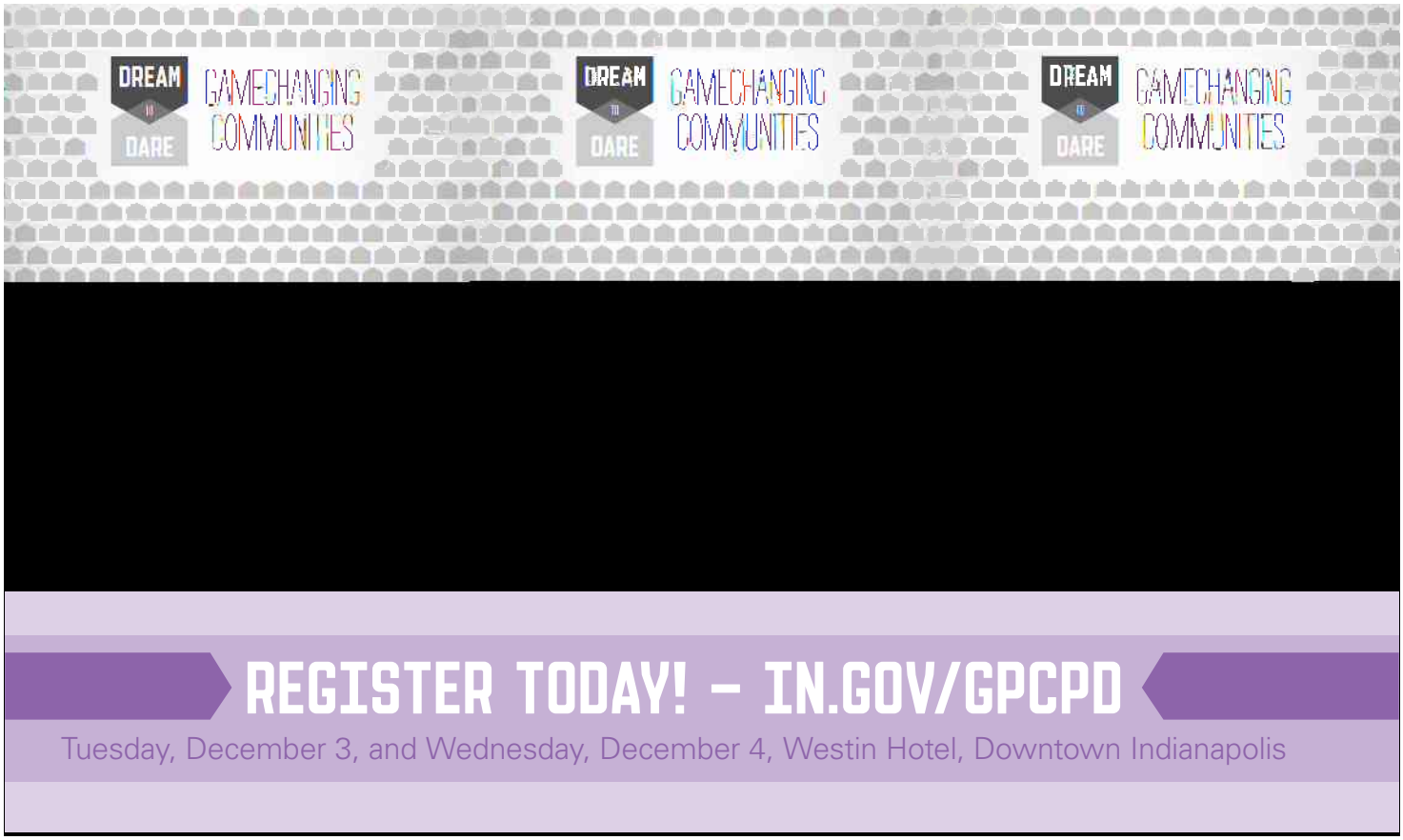
We welcome your suggestions for newsletter content and ideas concerning the actions of the Council.

phone: (317) 232-7770
email: GPCPD@gpcpd.org

www.in.gov/gpcpd



REGISTER TODAY! - IN.GOV/GPCPD

Tuesday, December 3, and Wednesday, December 4, Westin Hotel, Downtown Indianapolis