

Dr. Martens Shoes

By Hannah Barry, Lila Ohland, and Lexy Bailey



History of the Shoe

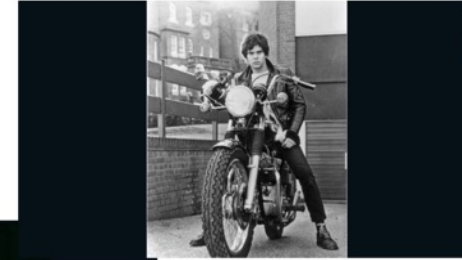
- Dr. Klaus Martens, a 25-year-old soldier, created an air-cushioned sole (rather than the traditional leather) to help aid his broken foot
 - Mechanical engineer Dr. Herbert Frank helped design the prototype
- By 1947 a formal production had been created, and in 1959 they decided to begin advertise overseas
- In 1960 an English-run boot company run by the Griggs family discovered an advertisement for the air-cushioned sole, they acquired an exclusive license and made key changes (such as an altered heel and a two-grooved sole edge), and by 1960 the first Dr. Martens boot arrived

The Revolution Of A Shoe Continued...

- Then, later in the 1960's, something interesting happened:
 - The 1460 boot and the music scene became one when "ska-loving skinheads" suddenly picked up the boot in fashion.
 - Shortly thereafter Pete Townshend-of The Who-wore the 1460's on stage as "a symbol of his own working class pride and rebellious attitude."
 - Thus altering the course of the boots social history; effectively changing the idea of a functional shoe into a subcultural essential for people of all walks of life.
- In the 1970's the boot became "a symbol of self-expression."
- In the 1980's girls bought and customized their own boots as part of the young peoples' peace movement in Britain.
- The 1990's brought the introduction of the DM 1460 to the United States making the boot synonymous with music.

Stigma Annihilation

- The Invention of Doc Martens and the expansion of the response created a nice melding of the Fashion world and functional clothing
- Doc Martens could also be stylized which was great because everyone is different and deserves the chance to express themselves no matter of their degree of disability
- Over time Doc Martens became synonymous with music festivals and rebellion which was probably wicked cool for those who needed them for functional reasons to see someone who did not need to use them for functional reasons wearing them.
- Doc Martens were also so easily accessible because so many people were wearing them
- No one could tell what reason you were wearing them for; whether it was for functional purposes or for a style choice, everyone was brought together.





Resources

- <http://www.cnn.com/2015/08/17/fashion/gallery/dr-martens-55-years-counter-culture/index.html>
- <http://www.drmartens.com/us/>

Closed Captioning



History and origin

Closed captioning was first shown at the First National Conference on Television for the Hearing Impaired in Nashville, Tennessee in 1971. After much encouragement from the deaf community, Washington's public television station; WETA, successfully tested the closed captioning system in 1973 using line 21 of the television signal. As a result of these tests, the FCC in 1976 set aside line 21 for the transmission of closed captions. In 1979 Department of Health, Education and Welfare inaugurated the National Captioning Institute to provide access to tv show for the deaf and community.in 1980, the institute aired the first closed-captioned television series. For the first time deaf people could turn on the tv and understand what they were watching. Today, closed captions and subtitles are standard in most movies and online web videos and shows. (ncicap.org)

For whom does it benefit?

First and foremost closed captioning was made to benefit the deaf and hard of hearing who were unable to understand what was happening on television. Now though,not only does closed captioning benefit the deaf and hard of hearing community, it benefits anyone who needs to use it or would like to use it to watch almost all forms of visual media such as film, online videos, and tv. It can also benefit people trying to learn english as it can help improve comprehension and understanding of the language

Does it still serve a purpose?

Closed captioning still has a purpose when it done to the highest quality.

Leerburger & Hannah Delong



- ▶ The idea of closed captioning did not begin as a way to help people with disabilities.
- ▶ The first debut of closed captioning technologies happened in 1971 at the First National Conference on Television for the hearing impaired.
- ▶ Gallaudet College is where ABC and the National Bureau of Standards presented closed captions for the first time in 1972.
- ▶ In 1972 “The French Chef” was the first tv show accessible to deaf viewers by using ‘open’ captioning.
- ▶ In 1990 the ADA made it a requirement that public places provide access to verbal information on televisions.

General Use



- ▶ Closed Captioning is useful for:
 - ▶ Films played for large crowds
 - ▶ English as a second language (language barrier)
 - ▶ For television/videos played in loud areas
 - ▶ Helps people focus
 - ▶ Boosts memory and comprehension

Affects on The Disabled



- ▶ The creation of closed captioning helped people with hearing impairment in the following ways:
 - ▶ Allowed them to watch television and be able to read the dialect of the program
 - ▶ Making closed captioning something that is used in many places for many different reasons took away the stigma of it being something made only for hearing impaired and deaf people.
 - ▶ Not only did the creation of closed captioning aid the hearing impaired but it also helps people with other types of learning disabilities, people who speak a different language, and just people in general.

Interview Data



- ▶ http://www.huffingtonpost.com/kat-blaque/why-i-started-captioning-b_9035760.html
- ▶ Above is an article written in The Huffington Post by a fairly popular Youtuber. Youtube has grown exponentially in the past decade but most Youtubers with the biggest fan bases do not use closed captioning. This article is about a Youtuber who never took into consideration that people with hearing impairments were not able to watch her videos. This came to her attention when a large amount of her followers reached out and asked her to start close captioning her videos so that more people could watch them. This concluded in a large number of her subscribers reaching out to her and offering to help her close caption her videos (since it is a large task to do for every video). Since this happened, more and more Youtubers are making their videos with closed captioning so that a larger and more diverse audience can watch them.

Resources



- ▶ **Blaque, K. (2016, January 20). Why I Started Captioning My YouTube Videos and You Should Too. Retrieved April 11, 2017, from http://www.huffingtonpost.com/kat-blaque/why-i-started-captioning-b_9035760.html**
- ▶ **History of Closed Captioning. (n.d.). Retrieved April 11, 2017, from <http://www.ncicap.org/about-us/history-of-closed-captioning/>**

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Talking Books for the Blind

INTERACTION OF HUMAN DIVERSITY
AND GLOBAL ENVIRONMENTS



Nicole Donnellan

History

- ❖ Dating back to 1932, the American foundation for the blind received a grant for the amount of \$10,000 from the Carnegie Foundation. This money was to be used for research of methods to deliver printed material to people who had vision loss.
- ❖ This started what is now called the “Talking Book Project”.
- ❖ The Talking Book Project is what spawned the idea of famous actors and celebrities being the voices for these ‘talking books’.

AFB American Foundation[®]
for the Blind

Expanding possibilities for people with vision loss

History cont'



- ❖ The first actual talking book was appeared in 1934. This book included excerpts from Helen Keller, O. Henry and the Bible.
- ❖ These early 'talking books' were called gramophones.
- ❖ It was not until almost 1950 that the gramophone evolved into magnetic tape.
- ❖ When the 90's rolled around, the popularity of audiobooks on 'compact disc' heightened.



Not just for the blind...

Multi-tasking... We all do it, or at least try to.

Talking books do not only allow the blind to 'read' but they also allow people who enjoy reading to do so while driving, eating, cleaning the house, or even working out.

The original intent for the talking books has evolved from a tool to a convenience of modern day society.

Reading is essential

Talking books can also help children learn how to read.

Being able to follow along with the words in a book, while listening to it, helps children with word identification. Not only can this help kids in the classroom, but it can also help adults who might struggle with reading and are looking to improve. In addition, there are also books like the Leap Frog that help kids learn letters and simple words before they even start school.



Disability can change the world

Without Thomas Edison inventing a way to record sounds on cylinders in 1877 there would not have been talking books. If it wasn't for one of the first talking books in 1932 by Helen Keller or poems by Edgar Allen Poe, it is very likely that we would not have the modern convenience of being able to listen to audio books.

Kids who use the Leapfrog to learn their first letters and words would not have that tool to be able to succeed.



A Disability Studies Presentation

OXO Kitchen Tools



Kayla Gray, Taylor Lenentine, & Jaime Roy

DIS 300 | The University of Maine

Origin & History

- Approximately 25 years ago, the creator (Sam Farber), noticed his wife (Betsy) was struggling with her arthritis to complete simple everyday tasks, including holding her vegetable peeler.
- With this, he came up with the idea to create an improved, comfortable kitchen tool.
- In 1990, 15 easy-to-use OXO Good Grip kitchen tools were introduced into the U.S. market.
- Today, OXO has over 1,000 products designed for a variety of consumers.



Missing a Glove?

- OXO has employees walk around New York City and pick up single gloves found in the street. From there, they look at the uniqueness of each glove and how they could create a tool to benefit those users. They understand that their customers are interested in buying something that they feel was created specifically for them.



Users



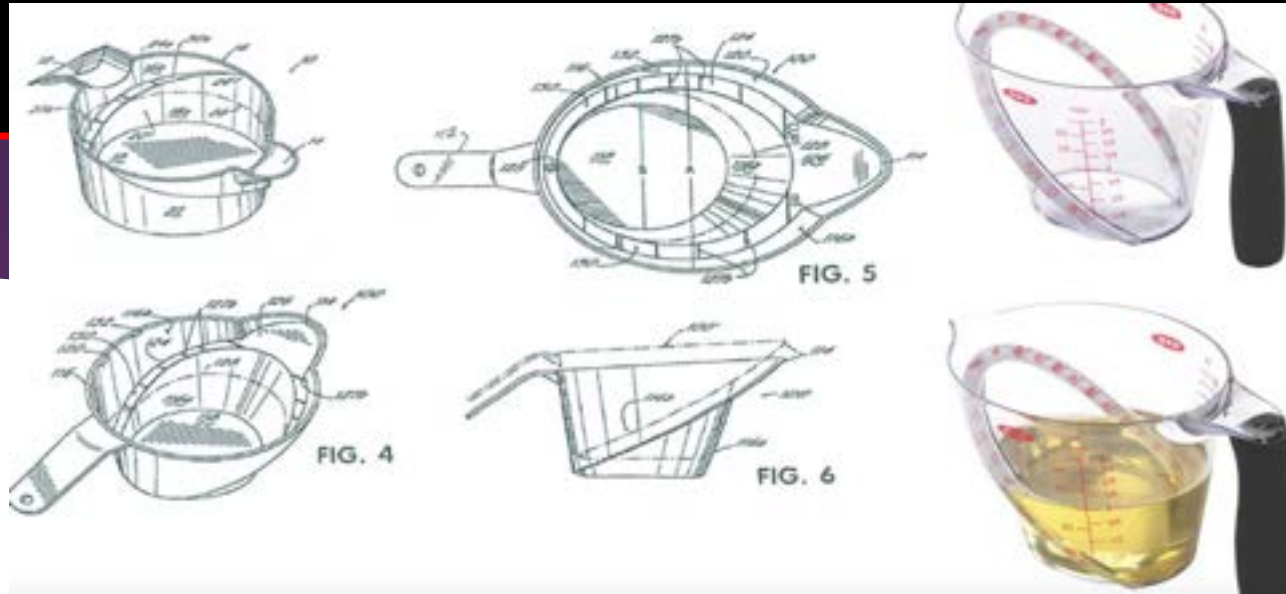
- Sam Farber created the idea of improving kitchen tools to benefit those with arthritis like his wife. Although the original design was created for his wife, he saw an opportunity to benefit all users.
- Through principles of Universal Design, they studied lefties and righties, females and males, and the youth and elderly.
- Their process in creating new tools followed the mentality of, “question everything” so that they could make the best improvements to everyday quality of life.
- OXO Easy Grip kitchen tools also have the capability to help people who have mobility impairments or lack fine motor abilities.

How are they designed?

- They decided to create a fat, black handle with a soft plastic called Santoprene. It is shaped and angled to comfort each individual hand.
- Santoprene is aesthetically pleasing (comfortable to touch), flexible, and has a reduced weight (lower density).
- OXO has also created a salad tosser that mixes the salad by pressing a large black button; this took away the need for grip and strength to turn a handle.
- The company recognized that consumers often had difficulty holding measuring cups above their heads due to strength and stability. The new design of their cups is to view the liquid by looking down on it. They then recognized that this product could be sold to the general population for its convenience.



Approach



While creating their products, OXO observed others interactions while using different utensils. They looked at those with arthritis and also the older populations to understand their disabilities. They attempted to find a way to eliminate the requirement of strength, grip, and coordination. This helped them create a better structure for their design. In getting feedback, they also had experts test their utensils; besides having people with disabilities and experts test the tools, they also had the able-bodied experiment with them to accommodate everyday shoppers.

How did disability change the world?

- OXO “has been recognized globally as an example of how a well-executed Universal Design philosophy not only creates products that are beneficial to end users but is also a sensible business model.”
 - Created for profit and as a business modality
- Although inspired by one individual with Arthritis, OXO Kitchen Tools entered the market and gained popularity across all populations due to their functionality and visual appeal.
 - With a sleek look, in addition to comfort and performance, OXO tools align with visual culture rather than looking like they are solely for the community of humans with embodied characteristics.

Concluding Thoughts

- In addition to the design, the accessibility of the kitchen tools in local and multinational retailing corporations has helped to reduce the stigma and stereotypical outlooks regarding everyday tools for those with disabilities.
- Sam Farber recognized that advertisement to the mass population, rather than specifically for people with disabilities, eliminated the stigma behind the product.





Jacuzzi-Hydrotherapy

MORGAN CAMPBELL, LEEANNA CMAR AND JENNA BISHOP

Intro to Hydrotherapy

Hydrotherapy is the use of water (hot, cold, steam, or ice) to relieve discomfort and better promote a person's physical well-being.

In classical times, the Romans and Greeks found sources of water that were considered to have healing properties which was the start of Hydrotherapy.

General Use

Although hydrotherapy was originally created to assist those who have “disabilities” and relieve them of pain, many found it enjoyable, or even relaxing, eventually leading it to be used globally by all types of people.

The two main forms of hydrotherapy that people use are

- Hot tubs

- Saunas

Yet there are many other options such as

- Wraps

- Hydrotherapy pools

- Water baths



Hot tub: Filled with hot water while jets swirl pressurized water around the tub, relaxes muscles





Wraps: cold wet flannel sheets are used to wrap the body. The person is then covered with dry towels and then blankets. The body warms up in response and dries the wet sheets.



Robotic Exoskeletons

ASHLEY GREEN, JAIMI CLIFFORD, KIMBERLY LOCH



Robotic Exoskeletons



Robotic Exoskeletons, are a more complex type of prosthetics that have been a focus of military use since the 1970's. Since this time period, the US has been working on robotic exoskeletons as a focus of: what could the human body achieve if the technology existed?

- The Military wanted to walk longer distances with more equipment without muscle fatigue;
- Fire fighters wanted to be able to lift heavier loads of debris beyond human strength;
- Nurses wanted to assist heavier patients with less staff and less risk of injury.

Prosthetics have always been focused on the disabled and helping people achieve maximum usage with the disability they have been born with, endured throughout young stages in life or tragic accidents later in life. However, there is always the question of what else can this technology help us achieve?



History

- ▶ Historically, prosthetics date back to 1295 BC. Archeologists discovered the 'Cairo toe,' which appeared to be attached at three points and wrapped in linen.
- ▶ Prosthetics continued to evolve throughout time, but remain rather simple and made of basic materials such as wood and metal.
- ▶ It was not until the 1960's that technology started to change the world of prosthetics.



In the 1960's



- The US Military wanted to “Integrate the capabilities of humans and robotic-machines into a unified system, offering numerous opportunities for developing a new generation of assistive technology” (Frumento, C., Messier, E., & Montero, V. ,2010, P.6).
- In 1965, the US Department, General Electric and Cornell University began developing an exoskeleton they called HARDIMAN (Human Augmentation Research and Development Investigation). “Hardiman” was a hydraulically powered wearable device used to drastically improve human strength.

Development

Research and development continued through the 1980's when developers ran into some limitations: "computers weren't fast enough to process the control functions necessary to make the suit respond smoothly and the energy supplies were not compact enough to be portable" (Frumento, C., Messier, E., & Montero, V., 2010, Pg 7). Another exoskeleton, "kinematic walker", was developed in the 1970's, but also faced some challenges related to limitations in the battery, computer and motor.

Development continued through 2001 with the interest of developing an exoskeleton that would increase the capabilities of ground soldiers. This would allow soldiers to travel further and faster as well as carry heavier equipment and armor.

BLEEX

(Berkeley Lower Extremity Exoskeleton)

The vision of BLEEX was to provide soldiers, disaster relief workers, and other emergency personnel the ability to carry major loads such as food, rescue equipment, first-aid supplies, communications gear and weaponry with minimal effort over any type of terrain for extended periods of time.



BLEEX is a project that is being funded by DARPA (The Defense Advanced Research Projects Agencies) with a \$50 million, five-year program which began in 2001.

Rehabilitation

Today, we now see many different types of exoskeletons, such as the ReWalk, Lower Extremity Powered Exoskeleton (LOPES), Bionic Hands (I-Limb), and the Hybrid Assistive Limb (HAL - Suit). All of which are now being utilized for rehabilitation.



ReWalk

ReWalk is a wearable robotic exoskeleton that provides powered hip and knee motion to enable individuals with spinal cord injury (SCI) to stand upright, walk, turn, and climb and descend stairs.

ReWalk is the first exoskeleton to receive FDA clearance for personal and rehabilitation use in the United States.



Cost:
\$69,000 and \$85,000

The ReWalk Personal System is designed for all day walking.

It provides:

- precise fit
- heightened walking speed
- The most natural gait of any powered exoskeleton.

LOPES

(Lower Extremity Powered Exoskeleton)

Created for the purpose of physical therapy

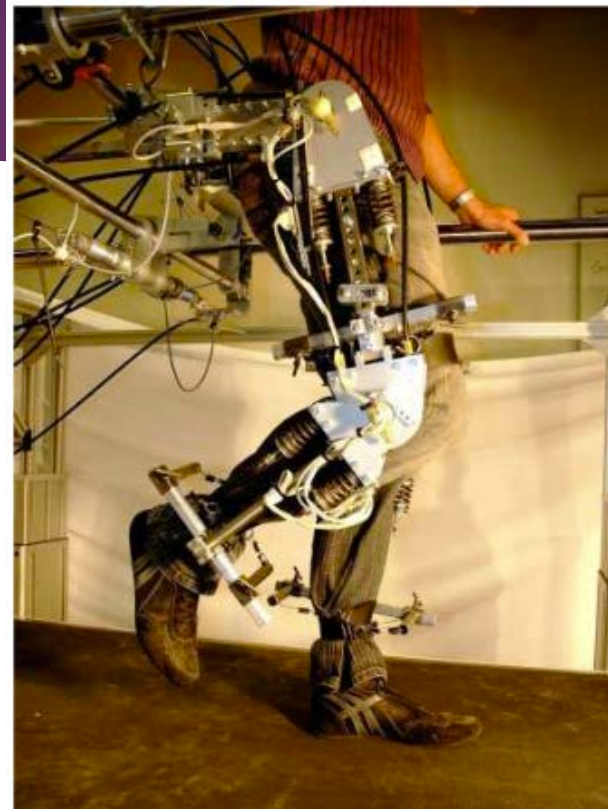
Meant for worst case injury

It is implemented for gait rehabilitation by using a treadmill training system.

Two modes

1. Patient is in charge and the robot provides no resistance or aid to the patient.
2. The robot is in charge and it takes over the functions the patient is unable to perform.

The exoskeleton works in between these two functions depending on how much aid the patient needs.



The target group consists of people who have suffered a stroke and have impaired motor control.

LOPES allows for leg movements while keeping lateral balance.

In order to achieve synchronization; the person's limbs are connected to the exoskeleton, so that robot and patient move in parallel

HAL – Suit

(Hybrid Assistive Limb)

COST:

The exoskeleton is currently valued at \$60,000

Designed to aid people who have degenerated muscles or those paralyzed by brain or spinal injuries.

This suit can assist with daily activities such as standing up from a chair, walking, climbing up and down stairs, moving heavy objects.



HAL-5, unlike BLEEX, is expected to be applied in various fields such as rehabilitation support and physical training support in medical field, heavy labor support at factories, and rescue support at disaster sites, as well as in the entertainment field.

Can used indoors and outdoors but is recommended to stay inside until better batteries allow for more prolonged use.

Cost

(Cost Rating)

The value of these devices will depend on cost and accessibility meaning are they obtainable by regular everyday consumers or large market rehabilitation centers.

Cost can be the deciding factor for many people depending on the service provider.

Cost Rating	
1	Above \$50,000 or no market price available currently
2	\$20,000-\$50,000 with the help of third party payers
3	\$20,000-\$50,000 without help of third party payers
4	Under \$20,000 with the help of third party payers
5	Under \$20,000 without help of third party payers

Accessibility

(Accessibility Rating)

- Some rehabilitation devices can only be used in certain locations such as a rehabilitation center. This is due to the high costs, size, maintenance, and/or the need for trained personnel.
- So, how useful a device is can really be limited to the number of patients who need the device and who actually have access to it.

Accessibility Rating	
1	Available in limited locations (only in a few States in large facilities)
2	Available in large rehabilitation centers only
3	Available in major hospitals and/or large cities
4	Available in standard rehabilitation centers or hospitals
5	Can be used at home

Accessibility

Access to exoskeletons creates opportunities to overcome disabilities generated by the environment (disjuncture)- some companies are working towards versions of the exoskeleton that allow users to walk up and down stairs, which currently doesn't exist. A personal exoskeleton, would enhance everyday tasks and emotional connections, such as;

- picking up kids for a hug,
- walking the dog,
- walking upstairs,
- addressing people at eye level,
- engage in conversation more directly,
- and the ability to hug standing up.

Maintenance and Repair

- Maintenance and repair costs, power issues, usability indoors/outdoors, calibrations, etc. are all factors that would be concern to any individual.
- People won't want to use anything that will frequently malfunction and require constant maintenance.

Stigma



-Stigma can exist for the physical appearance that is associated with disability. People often avoid looking at (or avoid in general) those in wheelchairs and find it hard to watch them “struggle” to move or do things. The technology used in the exoskeletons creates natural looking movements for the user.

-Exoskeletons can be mentally and emotionally inspiring for those with disabilities, which changes the stigma that they are worse off than able-bodied people and can increase their self-esteem (which typically decreases with disability). This allows them to do things such as have a standing eye-to-eye conversation instead of being looked down on.

-Society views people with disabilities as needing a cure or a treatment, incapable of fully participating in everyday life and living an unfulfilling life; while robotic exoskeletons aren't a treatment for disability, they do create more opportunity for disabled individuals that allow them to participate in events and situations they may have been unable to do in a wheelchair.

In Conclusion..

While the robotic exoskeleton was initially created for military use, it developed into a tool that could also assist people in other occupations before being utilized as a rehabilitation tool for those with disabilities. In this case, the response didn't expand from the disabled to general use, but from the general use through the military to disability rehabilitation.

However, individuals with disabilities are still largely affected by the robotic exoskeleton and its impact on stereotyping and accessibility. It still continues to be developed for all types of situations and individuals with or without disabilities.

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EyeGaze Tracking

BY: DEIRDRE LEIGHTON AND SYDNEY OSTERHOUT

Introduction:

The topic area of this presentation will be about eye gaze tracking and how the products and technology generated from LC technologies, Inc. Have evolved from being used for people with disabilities to other technological advances in areas, such as, national defense, gaming, and hospitals.

Also, this presentation will go over the origin of eye gaze tracking and show how this technology has affected individuals with disabilities.

History of Embodied Disability

In Eye Gaze Tracking

The history of eye gazing technology begins in 1986 in Virginia. The EyeGaze Edge is now one of the best selling features on the market.

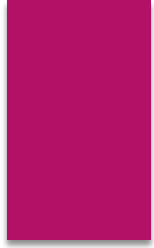
The Edge (pictured right) is a remote human computer that is inconspicuous and easy to use and was first established for people with disabilities.

These products produce highly accurate gaze point prediction and people with severe disabilities and other embodied disabilities have highly accepted them as a way to communicate with their eyes.



Getting away from Disability:

Eye gaze Technology has expanded greatly at LC technologies in the last 26 years and many new avenues have opened up for the company. The response to more eye gazing technology has expanded over the years due to the need of Assistive Technology, not just for people with disabilities.



- Economically
 - The company had to explore different opportunities in order to become more accessible to the able-bodied people.
- Practical
 - The company also made their products more practical, by creating a USB port where information can be stored and used on another device besides the EyeGaze Edge and the EyeGaze Follower
- Aesthetic
 - Although the EyeGaze technology has expanded beyond disability the aesthetic appeal of the product is still surrounding the use of people who have disabilities. Rather the computer program itself has changed and become top notch.

ALS



Steve Gleason uses the tech-Former NFL safety for the New Orleans Saints



Conclusion

The expansion that eye gaze tracking has created is starting to skyrocket with the improvements that it is making for those in need of the technology. Examples that show eye gaze tracking is improving life for those who need the technology include how diagnoses, specifically Autism, can be confirmed earlier in the diseases growth/progression. The eye tracking can also help to improve reading techniques, as well as help doctors diagnose a concussion at a faster pace. With that, the technology is now being used for not only medical reasons, but also in gaming as well as virtual worlds, and national defense. The expansion on eye gazing being able to not only help others who need it but also for those who are gaming gives it the stigma that it is and can be used by anyone, and that it is not just a medical necessity for disabled people.



This product has affected people with disabilities because it is attempting to close the disjuncture that surrounds eye tracking technology.

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