

300-year-old Chinese abacus ring was used during the Qing Dynasty to help traders.

#### **Old School Wearables**





#### **Smart Watches**



**Samsung Gear S2** 

**Apple Watch** 







#### **Smart Watches**



Watches that connect to a cell phone via bluetooth and allow for calls, texts, emails, calendar appointments, health apps and other informant to be displayed on the user's wrist.

Feature haptic feed back, GPS, heart rate monitors and accelerometer. Many different shapes and sizes to chose from. Newest Apple Watch does not require connection to a phone.

#### **Smart Watches - Fitness**









**Samsung Fit 2** 

**Garmin Vivofit 2** 





#### **Smart Watches - Fitness**



Much like other smart watches but more geared towards fitness and exercise.

Feature haptic feed back, GPS, heart rate monitors and accelerometer like other smart watches but may not allow as many apps or features. Can track sleep, food, activity, water, caffeine, etc.



#### Watchminder

Wearable vibrating wristwatch that allows the user to input up to 30 daily reminders.

Can choose from preprogramed cues, or add your own.

More cost-effective than other smart watches.



#### **Dot Watch**



Smart Watch that utilizes Braille and vibration to allow blind users full access to a smart watch.

Connects to iOS and Android. Dot app allows for more features.

#### Sunu Band

www.sunu.io

Navigation aid that utilizes echo location, augmentative reality and sonar to assist blind and low vision individuals with avoiding obstacles.

Provides hepatic feedback and can link with a GPS app.

Works in tandem with white cane or leader dog.



#### **Motiv Ring**

mymotiv.com



Stylish smart ring that links to an app to track activity, heart rate and sleep.

Waterproof and able to run for up to three days on a single charge.



#### **Lechal Hepatic Footwear**

www.lechal.com



GPS guided footwear that allows you to know where you are going without the need to look at your phone.

Comes as insoles, buckles and pods and connects via Bluetooth. Items can hold charge for 15 days and work offline.



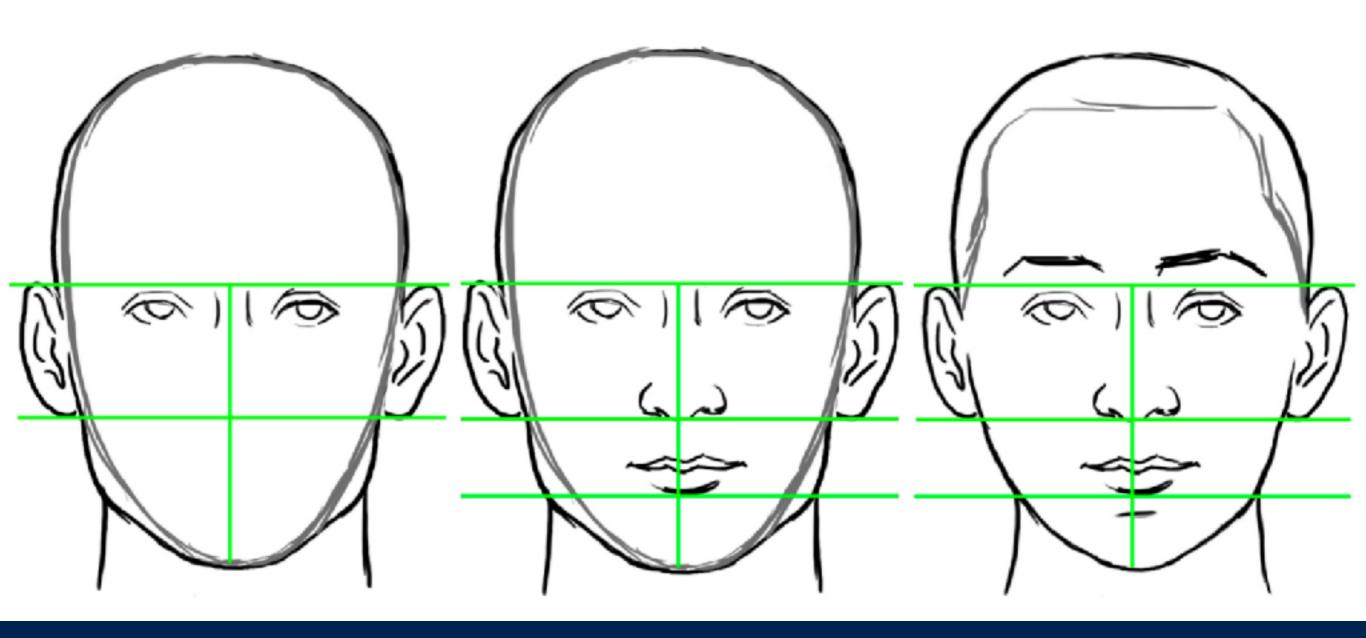
#### Sensoria Fitness Smart Socks

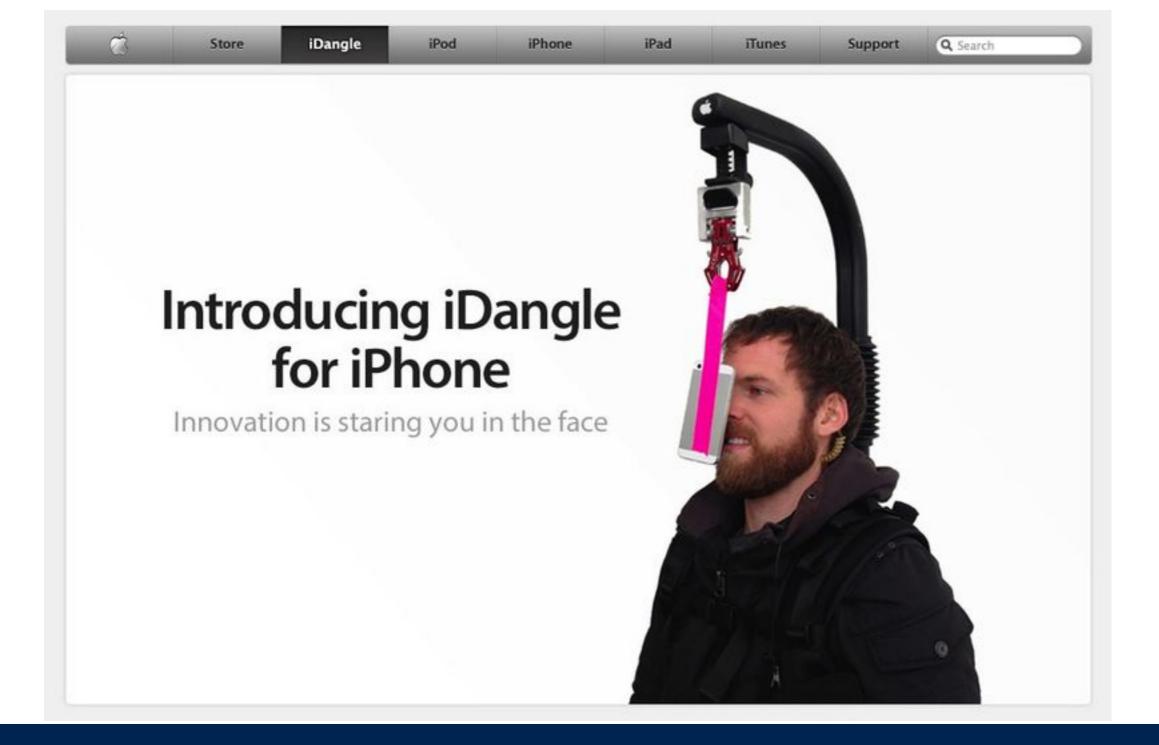
www.sensoriafitness.com

Sensoria Smart Socks pair with a bluetooth anklet and smart phone to track step counting, speed, calories, altitude and distance.



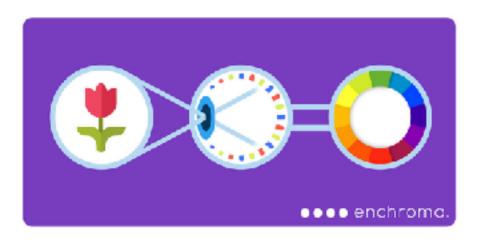
Device can also track cadence and foot landing techniques as a user walks or runs to improve running style and minimize injuries. Includes virtual coach via smart phone app.





#### **Encroma Glasses**

www.encroma.com



Glasses specially made to assist those with color blindness to see the world in bright, living color.

The glasses come in all different shapes and styles to help individuals with color blindness not only see colors, but look good being seen.





#### **Jordy Low Vision Glasses**

www.enhancedvision.com



Magnification glasses featuring distance and near viewing, brightness control, color enhancements and HDMI input for computer or TV viewing.



#### **eSight**

https://www.esighteyewear.com

Glasses for the visually impaired that allows them to see again. Does not work for all visual disabilities.

Users become trainers in a community that offers support throughout the life of the device.



#### **OrCam Glasses**

vww.orcam.com



Wired or wireless wearable able to read text, identify people, currency and objects and read bar codes.



More features coming all the time.

**OrCam Video: Amy** 

#### **Iris Vision**

www.irisvision.com

Uses Virtual Reality Headset to give the user a 70 degree field of view, multiple color enhancements and an IrisBubble view for magnifying specific information.



#### Google Glass

2014-2015...

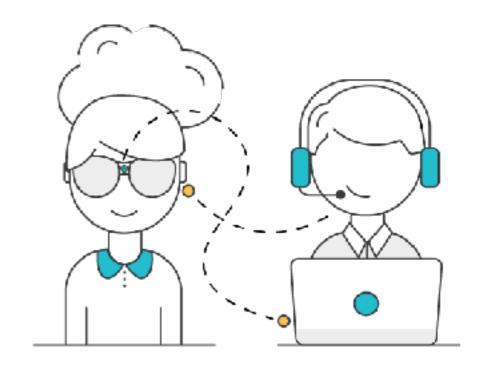


Face mounted computer system from Google X. Discontinued after a little more than a year in production.

Returned in 2017 with the Enterprise Edition for businesses to build their own uses for Google Glass

# Aira www.aira.io

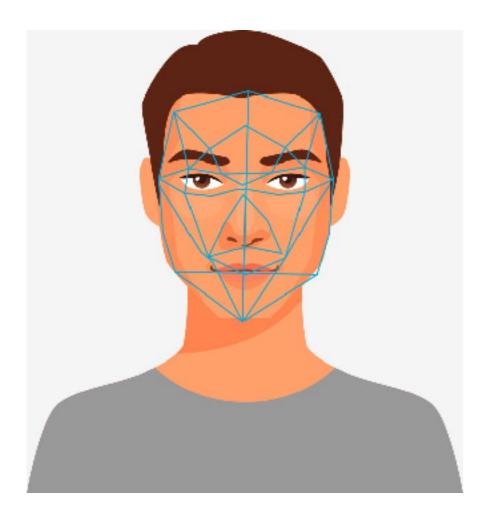
Utilized Google Glass and an app to allow users to access agents to assist with navigation and other daily needs.



**Aira Demo Video** 

#### Google Glass and Autism

http://autismglass.stanford.edu



Researchers at Stanford are using facial recognition software with Google Glass to help individuals with Autism read facial expressions and learn social skills.

#### **Iphones and Hearing Aids**

www.apple.com/accessibility/iphone/hearing/

Certain hearing aids can connect to iPhones via Bluetooth allowing for calls and alerts to be sent directly to the user's devices.

Also allows the user to utilize the microphone on the iPhone as a receiver in noisy environments. New hearing aids and cochlear implants added all the time.





#### **Brightsign Glove**

www.brightsignglove.com

AT start-up company developing a glove that can interpret sign language and have voice output for hearing individuals.



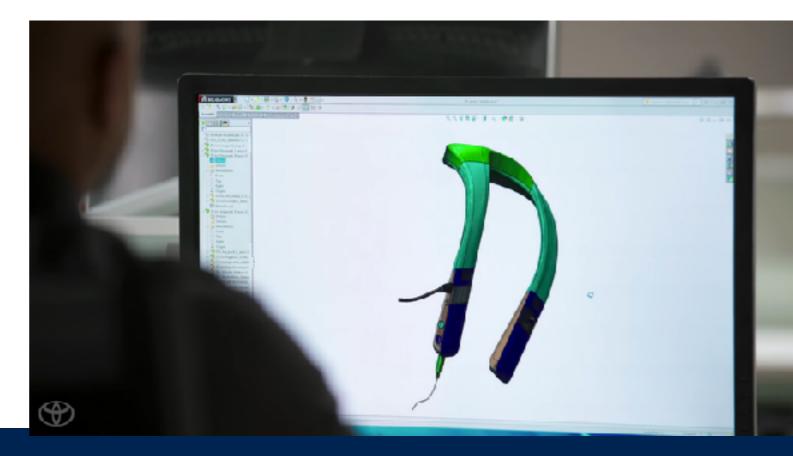


Many companies are developing wearables to assist with spinal cord injuries and rehabilitation needs. Mostly still in development phases.

#### **Toyota's Project BLAID**

www.toyotatoday.com/news/project-blaid.htm

Using cameras, vibration, speakers and bluetooth, tells the user what is around them when indoors where GPS does not always work.





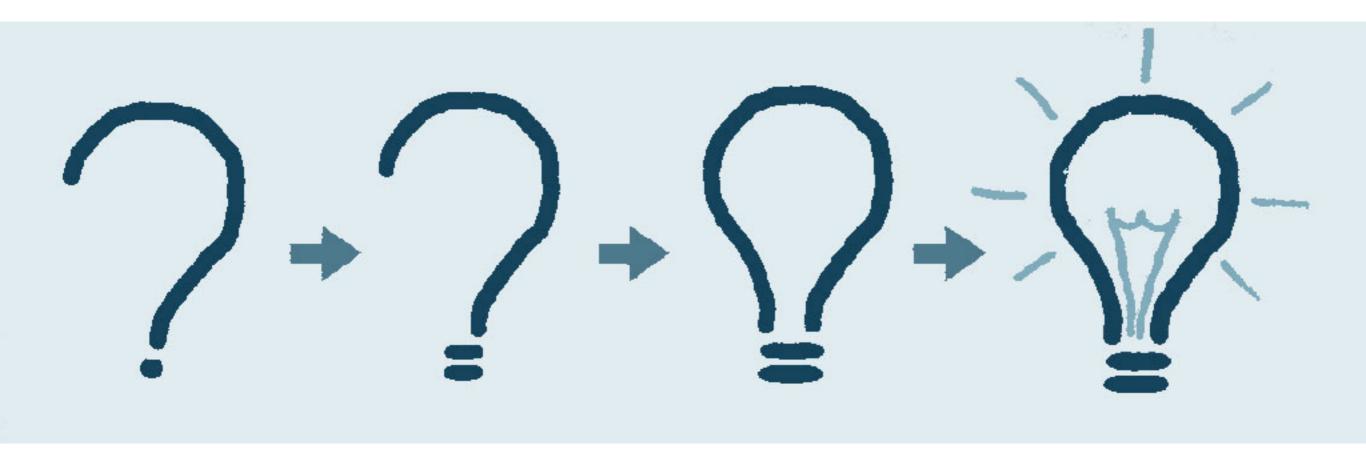
Neat...but so what?

# How can wearable devices help an individual with a disability?

- Monitor time and other notifications without standing out.
- Easily navigate surroundings.
- Access computer and printed material.
- Monitor health and fitness.
- GREATER INDEPENDENCE!!!!!

# Bringing it all Together

#### **Questions?**



#### Thank You!!

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