



### Problem

People who have hearing disability/deaf face issues at finding a job, needing extra care when they were young, and at driving.

### Solution

To create a user-friendly ecosystem to help cater people who have hearing disabilities to be able to use technology to help support their daily activities.

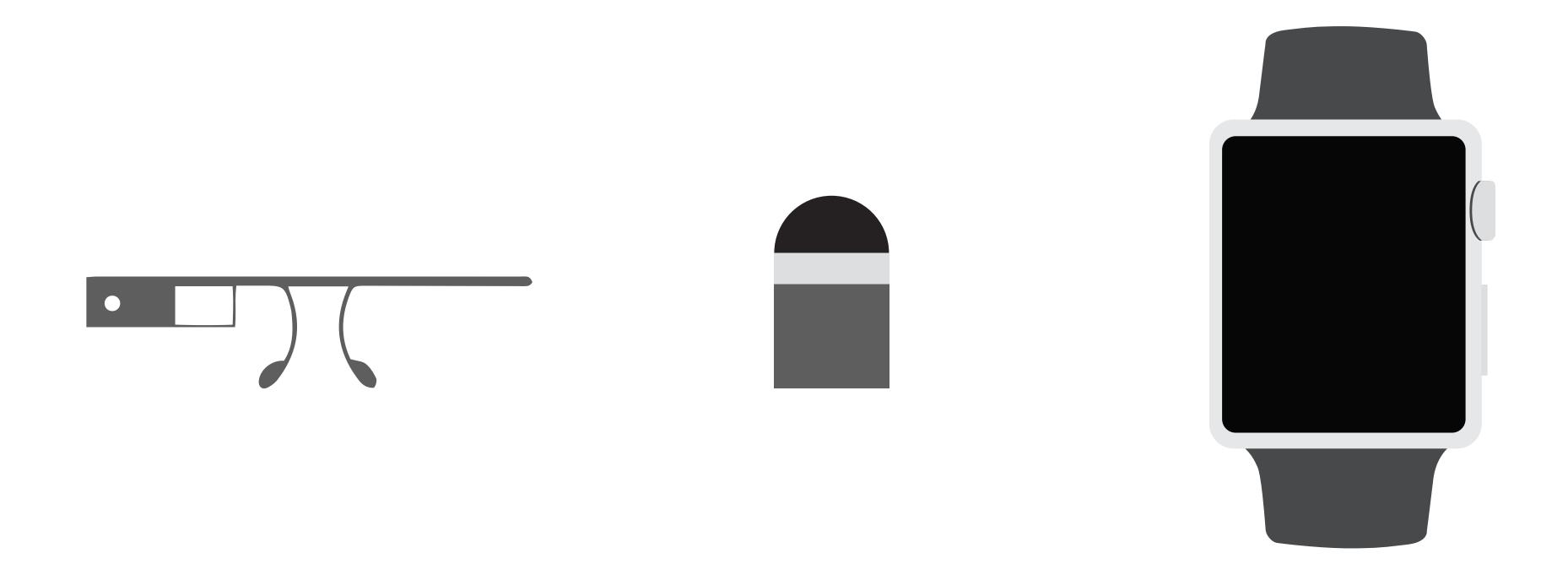
### What it is

Sign is a web - based company that creates a sense of community, to innovate on technology especially to cater people who have hearing disability.

Sign uses current technology that we have today to enable the deaf community to be able to:

- 1) Easily communicate
- 2) Help improve their daily activities with certain things that have never been done before
- 3) Create a support online community

## Devices



### Research

360 million people are deaf, a little over 5% of Earth's pop.

Deaf people have a higher chance of mental health problems.

Top issues they face: job, education, social and driving.

Caflifornia itself has around 24 million people who are deaf.

California Lyft Driver still uses paper to communicate while he drives with his customers.

About 2 percent of adults aged 45 to 54 have disabling hearing loss. The rate increases to 8.5 percent for adults aged 55 to 64. Nearly 25 percent of those aged 65 to 74 and 50 percent of those who are 75 and older have disabling hearing loss.

Five out of 6 children experience ear infection (otitis media) by the time they are 3 years old.

One in eight people in the United States (13 percent, or 30 million) aged 12 years or older has hearing loss in both ears, based on standard hearing examinations.

Men are more likely than women to report having hearing loss.

Employers might not hire a deaf person (WWYD)

Signs Restaurant

Interview

### Research

Through research, we can see that there are still lots of opportunity for technology to play a role in deaf community's lives.

Children are usually transfered to special hearing aid school.

It is difficult for them to find a job.

Elderlies are supported with hearing aids that still don't work as much.

Deaf children are prone to more stress, loneliness and bully.

Frequency more than 40db is detectable compare to others.

### **SWOT**

### Strengths:

The ecosystem is crowd based, so people can contribute and tell Sign the problem themselves, and Sign will create new products based on what people need. Direct.

#### Weaknesses:

It requires technology like Google Glass that some places don't allow such device.

### Opportunities:

To target a niche implementation that could actually use the technology today to cater their needs.

#### Threats:

Other apps developed, competition.

## Competitors

#### SignGlass

a single app that especially translates to pre-recorded video to show students with hearing disability live explanation of a planetarium.

#### Siemens

a long time popular brand, it provides hearing aids that are well known to work very well. However, price varies and could reach upto \$3000.

#### P3

a mobile app that allows a call relay with an operator to translate sign language to the other end of the phone.

#### Clear Captions

from the same makes of P3, it turns your calls to closed caption.

#### **Z**4

makes calls into video calls

#### iASL

resource on Amercan Sign Language.

#### Tout

like twitter, but for video

#### Snapchat

video and picture social app that deletes it afterwards

#### **Dragon Dictation**

dictation technology that detects voice and converts it to text.

Other hearing aid companies.

Problem with these is that they don't have a direct conversation and one on one communication in smartphones. We don't need to hand off devices here.

## Demographics

1 in 20 Americans are deaf 1 in 6 have hearing loss Over 28 million people are deaf in US More than half of people who have hearing loss are 65yo+ Less than 4% are under 18 yo 46% are 44-65 yo Men are more likely to report hearing loss than women

## Target Market

Targetting at ages between 6-74, Sign tries to make technology open to everyone, depending on the technology used. Children who can't communicate with their parents, friends and family through sign language can use the watch.

While the elderly and teens also could use the watch, the middle aged ladies and gents could use the Google Glass, whether it's for work or social.

### Persona 1

### Sophia, 13 years old



#### About

Sophia is an outgoing, lovable person. Just like any girl in her class, she loves to play dressups, watch movies and play with her iPad. She is good at writing, and she loves storytelling. She loves the freedom of imagination, for her to be freely express herself.

#### Story

Sophia faces a little difficulty communicating with other people, whether people talk about the new Taylor Swift music hit or just trying to keep contact with other people. She also gets bullied or harrassed at school.

#### Solution

The Watch app can really help her by giving her to be able to let other people know what she thinks and feel quickly by sending quick messages through the app. The connection between watches will change how deaf people communicate with non deaf people that she meets.

An additional feature is where selected contacts are notified when she is in trouble by quickly tapping the watch at least 5 times.

### Persona 2

Steve, 23 years old



#### About

Steve is a diligent guy. He loves to work hard, loyal and doesn't dissapoint. While he pursues his studies in design, he also plans to work at a local startup.

#### Story

After a couple of tries to find a job, he meets the owner of a local tech company. At his interview, the interviewer told him that they have Google Glass to be able to communicate him through Sign app, to be able to translate both ways.

#### Solution

Steve can use the Google Glass app to translate sign language to each other, making collaborations much easier.

### Persona 3

Marianne, 56 years old



#### About

Marianne is a married businesswoman who works at the financial district in an office. She is very family oriented and always puts her a family first. She loves her husband and two daugter very much.

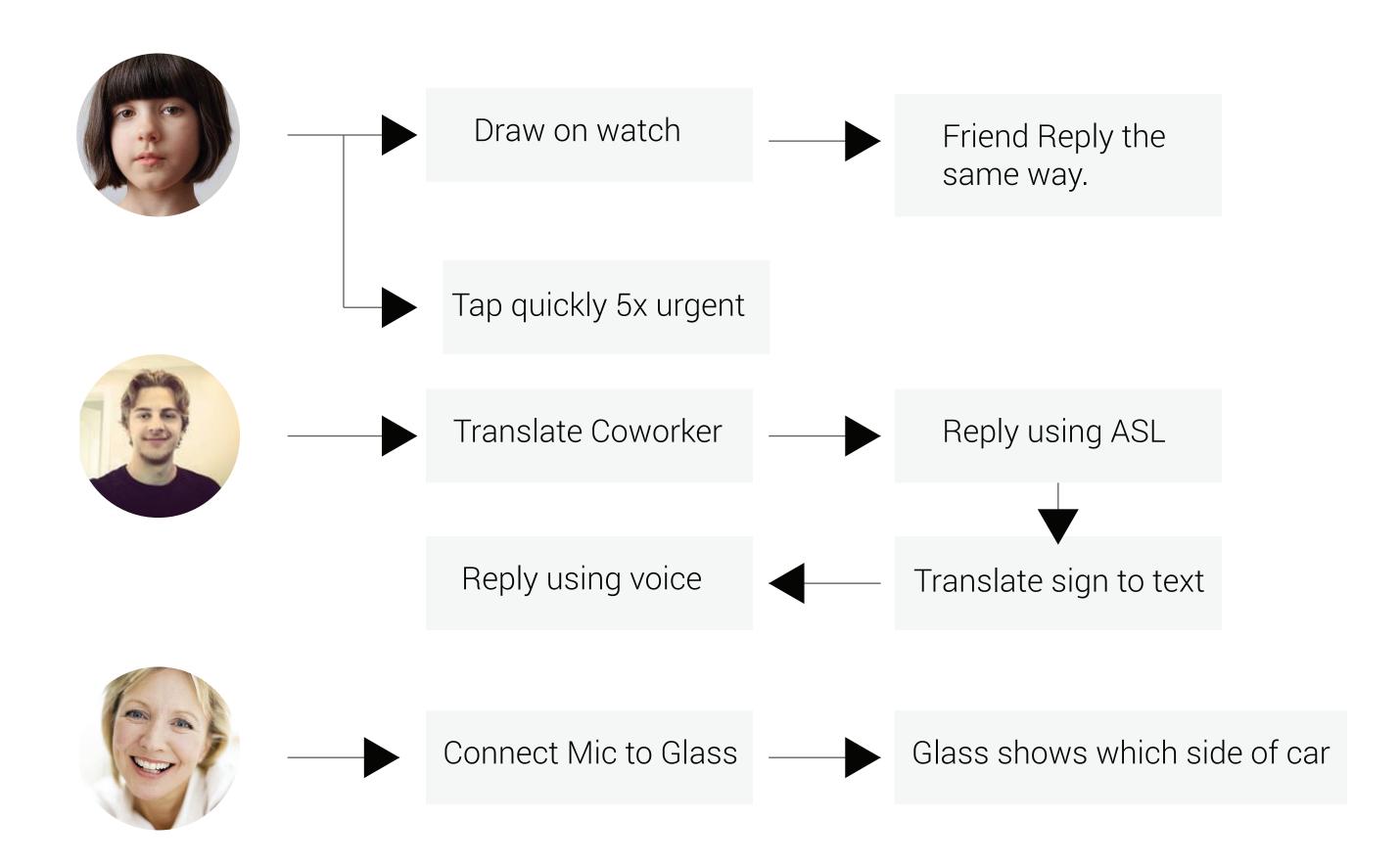
#### Story

Marianne drives from her house on the way to work. In the middle of street, suddenly there is an ambulance from the back of her car going fast. She didn't see it and only realized after she saw the red lights when the ambulance was behind her.

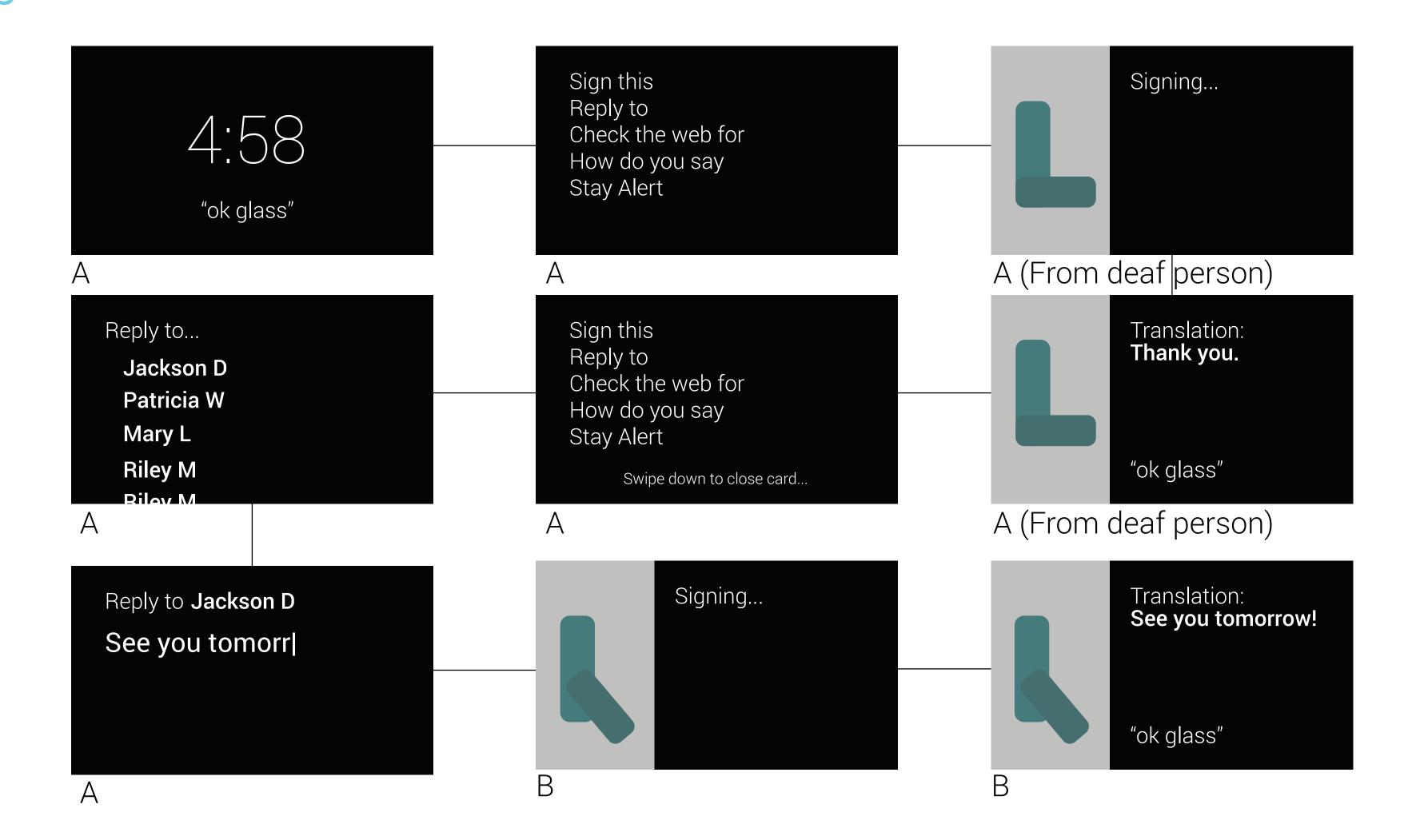
#### Solution

She utilize the microphone and Google Glass so that it would avoid blocking service cars and any other potential accidents.

## Typical Flow



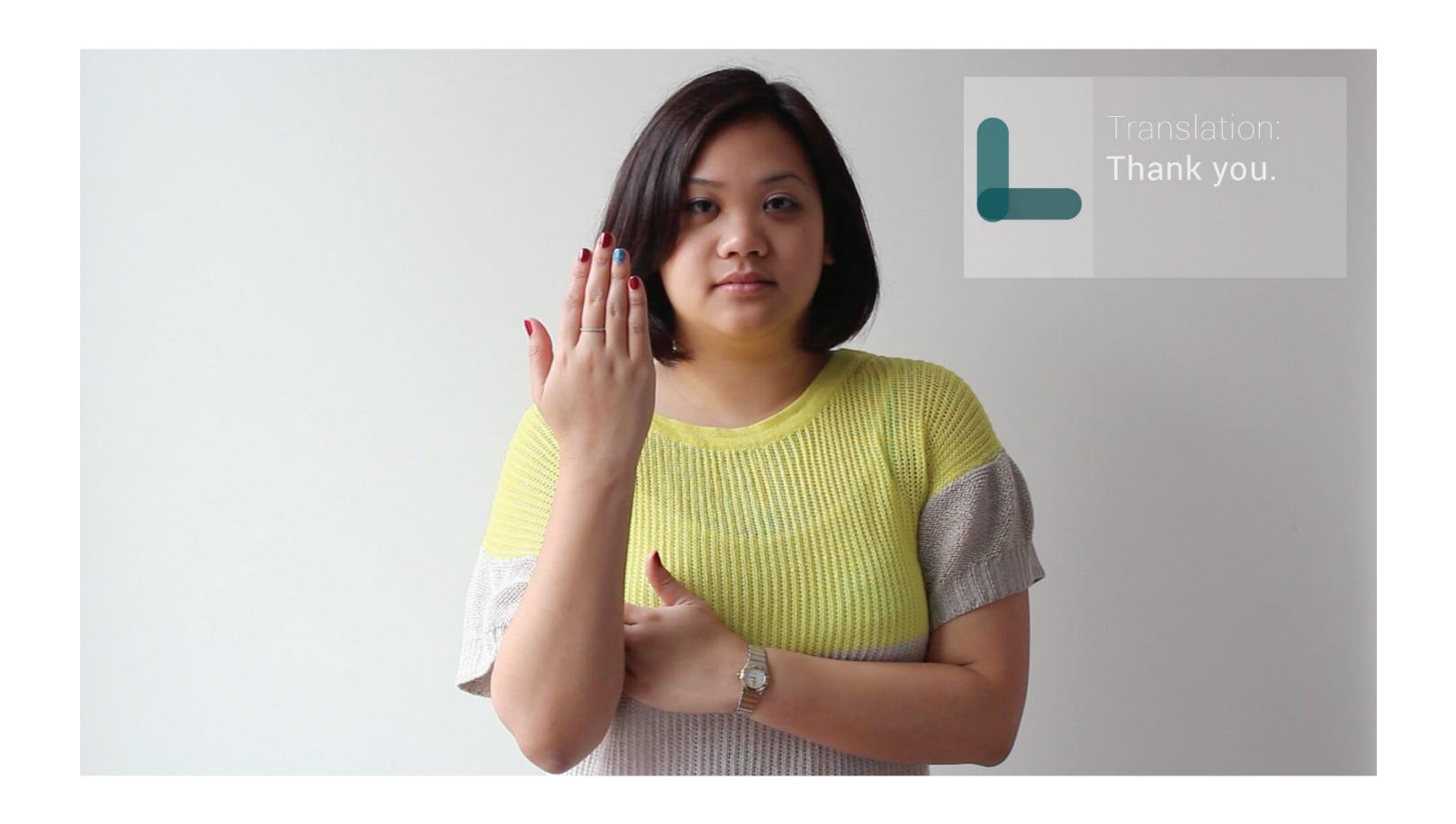
### Glass



# Glass



# Glass



# Glass/Mic



## Watch





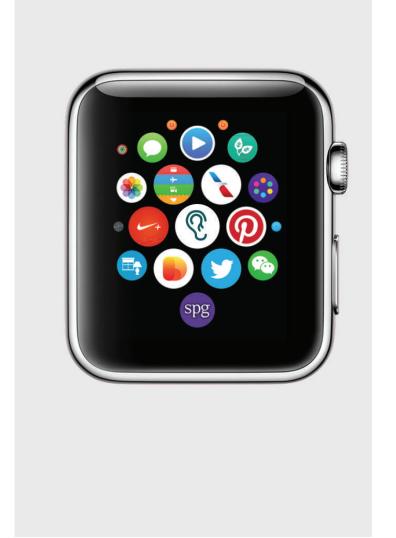




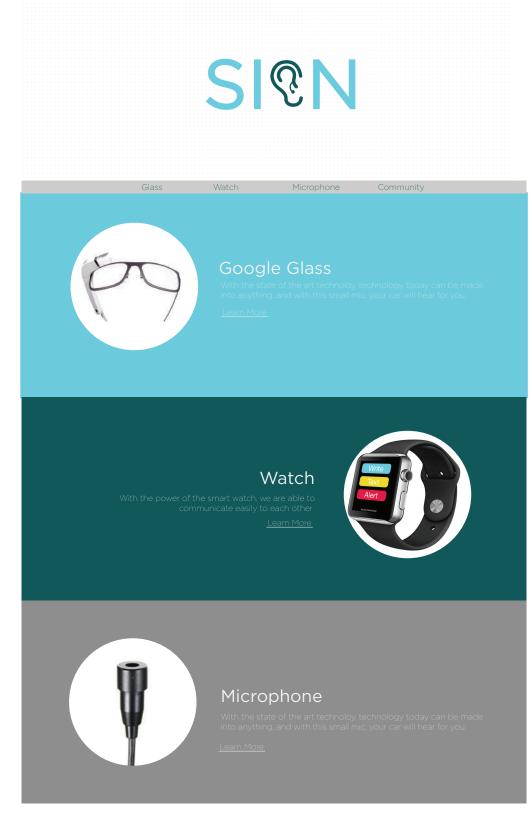








## Web Site



Sign Up Sign In

Community

Sign strives to support the Deaf and Hearing Disabled. Join us to discuss new topics and give feedback and story to us so that we can bring great ideas to lie.



Watch Interview

### Details



The Glass app connects the devices together, so that it will eliminate the need for handing off devices back and forth. The deaf person would be able to send their sign language to the other Google Glass's camera, and the other would be able to reply using their voice. The deaf person would be able to see it in text, and they connect through location and social based networking. The app also has the ability to check the internet for references or anything.



The Watch is another way to communicate easily by drawing, sketching or tap frequently used phrases. This is nice for children, parents, and the elderlies. Another feature is to tap 5 times fast enough so that it will send an alert to a pre memorized contact number to. For example, bullying...



The Microphone is connected to a box, that sends and receives bluetooth signals to the Google Glass. It notifies the deaf driver about a noisy sound and where it's coming from. As to how loud it will notice it, it will have to be more than 40 decibels of volume to be able to communicate to the microphone.



The Web is a hub where the community can sign up and post comments and feedbacks to Sign, to give improvements and maybe new ideas for the next products.

### Word List

Deaf

Embrace Glass Driving

Translate Sensor Audio

Connect Auxiliary Replacement

Communicate

Audiotory

Gesture

Disabled Aural Live

Sensory Hear Spark

Dependent Listen Community

Eye Music Crowdsource

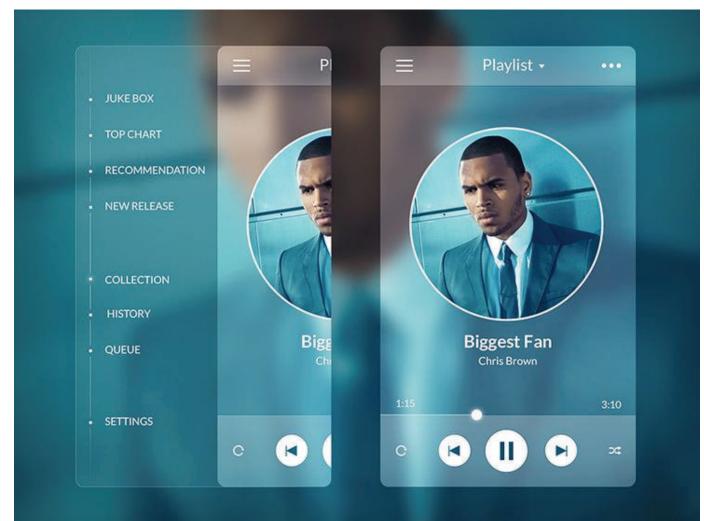
Representation Sign

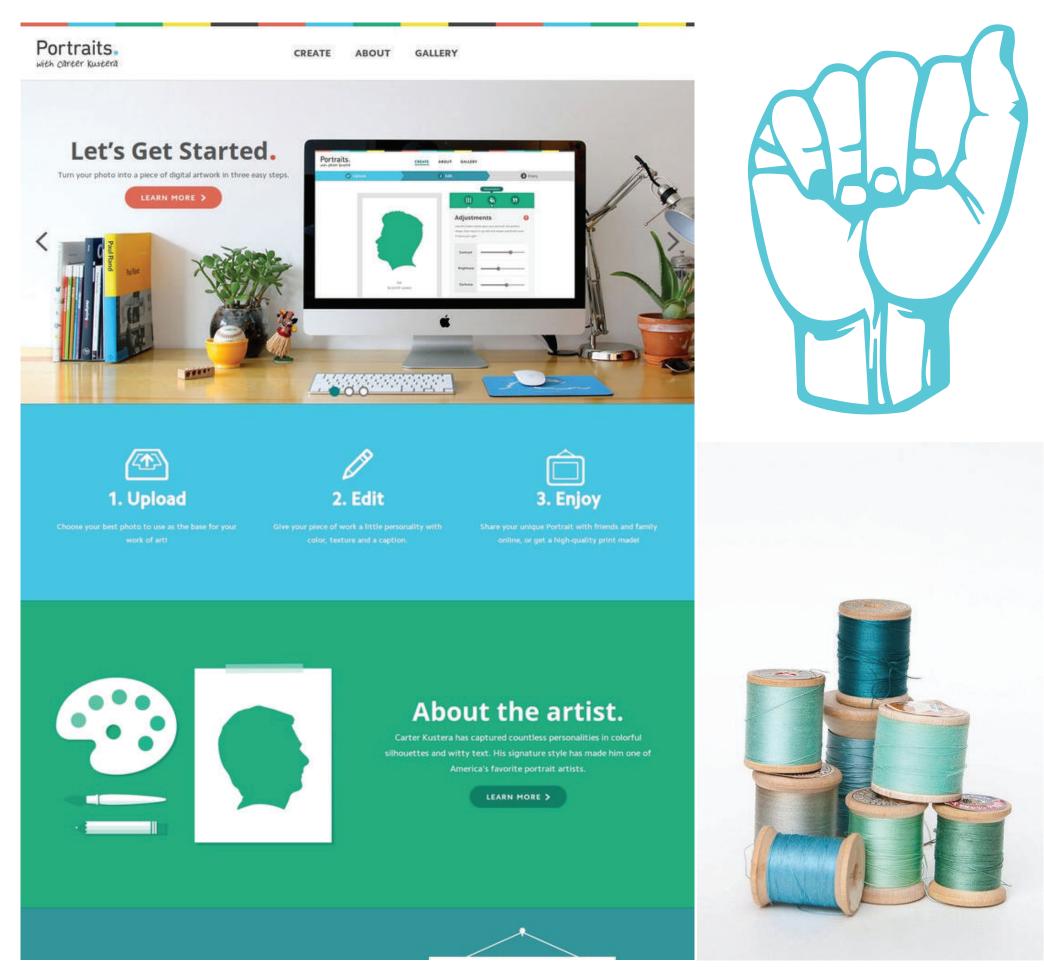
ASL - American Sign Language

## Moodboard

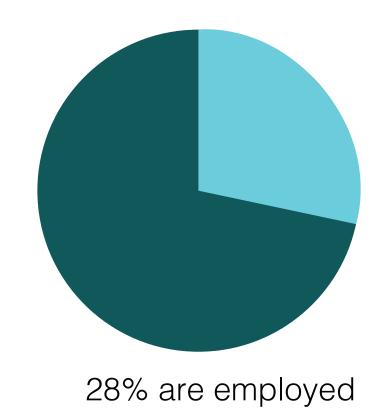


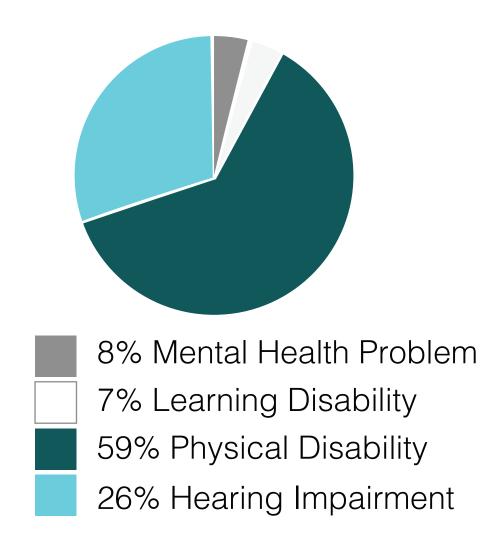


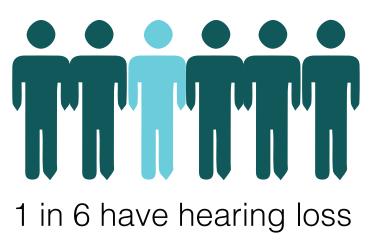


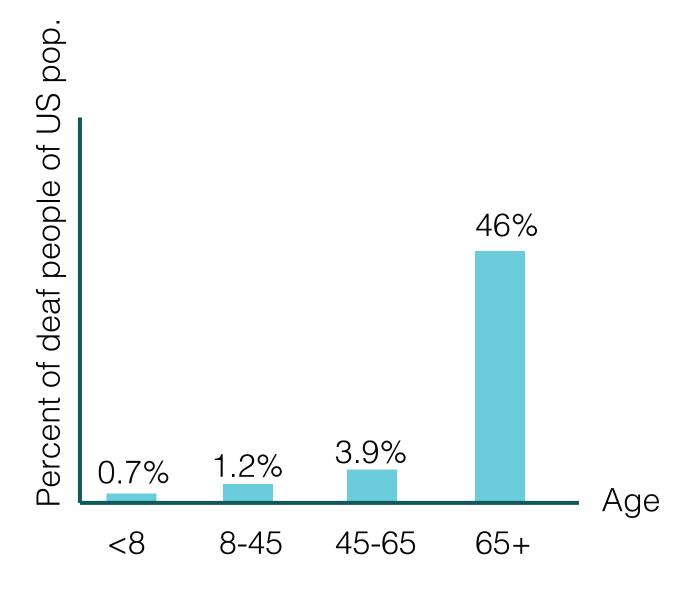


## Infographics

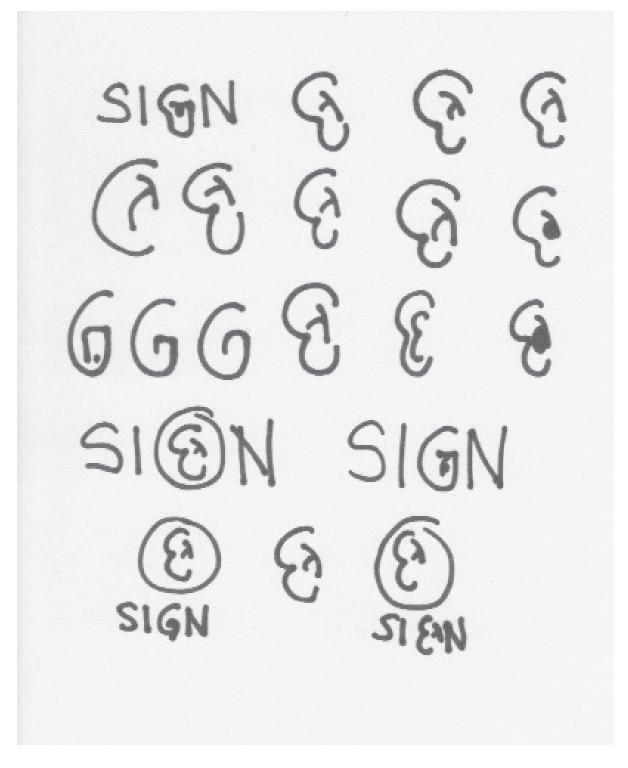








## Logo



Initial Concept/ Sketches



Grid + Golden Section

## Logo











#### Gotham

ABCDEFGHIJKLMNOPQRSTU VWXYZ abcdefghijklmnopqrutuvwxyz 1234567890

# Video



Click to view video

## Interview



Click to view video

### Resources

http://www.kennykellogg.com/2013/08/andrew-lyft-driver-who-happens-to-be.html?m=1 http://www.huffingtonpost.com/2014/08/05/sign-language-restaurant\_n\_5651582.html https://research.gallaudet.edu/Demographics/deaf-US.php http://evengrounds.com/blog/how-do-deaf-people-use-the-phone http://www.nidcd.nih.gov/health/statistics/pages/quick.aspx http://deafness.about.com/cs/parentingarticles/a/teasing.htm http://timesofindia.indiatimes.com/city/mumbai/Maharashtra-warns-all-vehicles-to-lower-honking-volume-by-at-least-87/articleshow/41027228.cms

