

# Babble Vue

Prototype Design

Spring 2018

## Project Insight

Deaf people rely on body language, social cues, and lip reading to interact with hearing people. It is a major struggle, and much of the time deaf people are discriminated against and taken advantage of because of their inability to hear. In polite society, deaf people still lack the access to basic necessities; something we seem to take for granted, such as being able to enjoy a movie in a theatre, maintaining a steady job, or mingling with a group of people to talk about work. Chances are majority in the group will not know any Sign language, and there is a likely guarantee of translation in error somewhere in the conversation; either from misreading lips or making the deaf person feel inferior because of the method of communication; i.e - pen and paper, or incorrect Sign usage.

I see a close family friend whom is completely deaf, go through these struggles everyday. His experiences make him a bit wary of hearing people and he tends to lean more towards deaf culture, rather than interact with hearing people, unless it is my family. We took it upon ourselves to learn some sign to interact with him properly. I've seen people talk about him, most often when he was still in the room, or standing next to them. He's not able to keep a job for more than a few months at a time because of workplace injustice, and he gets so frustrated, but then I see him pull himself up and try again. Coming up with the solution to this issue was a major hurdle. I thought to myself, 'How is it that one small disability seems to strip a person of their dignity and make them less than any other person, don't they deserve to be treated like the rest of us would want to be treated?'

The most driving problem I wanted to solve was the talking bad right in front of him. It is quite possibly the rudest thing I'd ever seen, and I wanted to make a device that could translate what was being said without the need for an interpreter and that avoided the conflict of misreading lips. Something simple, affordable, and effective in its purpose. It would need to be something they could see - a visual aid, if you will, and something that somebody wouldn't be over encumbered to carry. I figured it also had to be small and light, and then it instantly clicked - glasses! I could incorporate this feature into glasses, and those glasses could even be customized with a prescription if the user also had bad eyes.

In designing this device, the glasses would need to have some kind of sensor on the, a specialized camera that could track a person's facial movements with an algorithm similar to iPhone 10's facial recognition feature, when they spoke to relay a word that could be translated into sign language onto the glasses' lens surface. The message relayed would have to be in real time, and in the peripheral so as to not completely block the user's vision, and could be turned off. The display would have specialized cells within the glass that would interact with photons from a non-harmful type of laser light.

It is my hope, that if this ever gets produced in the future, that it will help millions. That it can give them the tools they need to keep a steady, good paying job, that they can go enjoy a movie without subtitles, that they can be in a room with hearing folks, and not feel insignificant. I want this to make them feel powerful and in control. That is what I want from this solution.

## Research & Observation

Deaf Research consisted primarily on observations made at deaf culture events and how our family friend interacted with the world, research done from books, documentaries, and deep web searches, and getting first hand accounts of experience (good and bad) from other deaf individuals, and some more brainstorming on coming up with a plausible solution to my main identified problem - closing the communication gap between deaf individuals and hearing individuals.

I found the disparity of this issue staggering when I went back and reviewed things I found in my research and my observations. Many deaf people felt unsatisfied with Society and how they are treated, and some deaf people have built up resentment towards hearing people in general because of the inappropriate treatment of their disability they receive on a daily basis. Others feel that they would be willing to bridge the divide if something could help them communicate effectively with hearing people.

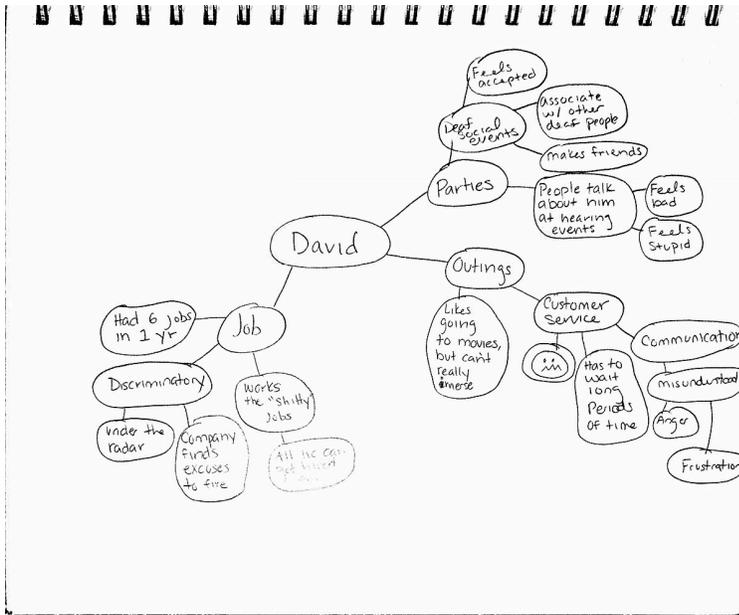
This gave me some hope that quite possibly there is a way to stop the negativity on both ends. On the perspective of hearing people, my research told me that the main reason people reacted towards deaf people (either subconsciously or consciously) the way they do, was because they felt awkward or nervous around deaf people, they were afraid to communicate with them, the same feeling one often gets when going from their country to a foreign place that speaks a completely different language. They don't want to associate with something that will make them feel inferior or like an idiot, so they practice avoidance. And if avoidance is not available, psychologically humans will do anything in their power to turn the situation to benefit themselves, even at the cost of someone else's feelings. Deaf people have this same perspective, and so most prefer to only associate with other deaf folk to fit in and feel apart of something greater than themselves, which is completely understandable for any person; we are pack animals after all.

This got me to thinking that if that communication bridge was filled somehow and the communication barrier taken away, more deaf and hearing people would mingle better, and that the social stigma of being deaf could be dampened enough that deaf people could enjoy the things most hearing people take for granted, like going to a movie, or a concert and be able to see the words, instead of sound vibrations.

Here are some of the brainstorming and mapping notes, I have made in regards to this creative process:

(Please see next page.)  
Thought Process

Mind Map



Perspective/Ideation Approach

