hulu

Accessibility Research

Summary Document

Section One: *How Our Hypotheses Evolved*

When we began this project, we developed working assumptions in the following areas:

- One way was to explore tangible objects, accessibility features on an interface or AI voice recognition/command platform. One thing that stood out to us, in Sophia's case, was that she wants to find a great voice recognition software.

Having completed this research, we now understand the following:

With the research completed to date, we have discovered that people with disabilities who cannot perform fine motor skills have a very difficult time with technology accessibility, it's very difficult for them to complete simple tasks like navigating through a streaming service, finding content on their device screens, their disabilities often include loss of control of their bodily movements, impaired vision, unable to type with more than one finger at a time, getting logged out of services due to their slow navigation. Disabilities vary from person to person. A solution that might work for one person might not work for the next.

Karen, one of our participants, developed juvenile arthritis at an early age, it has degenerated as time has gone by, she has difficulty grabbing objects and holding on to them for long periods of time, it's difficult for her to navigate on her devices due to the deformity of her fingers. Our second participant, Sophia, has lost control of all her bodily movements, it is very limited, the result of a seizure 5 years ago, now she deals with impaired vision, impaired speech, and now types with one finger, her condition, like Karen has deteriorated as time goes by.

A solution for people with disabilities is more complicated than originally thought. Disabilities come in many different forms, limited movement of limbs, no physical movement at all, visual impairment, hearing loss, different levels of speech impairment are just some of the disabilities

in our target audience, and uncomplicated comprehensible accessibility to technology takes a different form for each one of these users.

Section Two: Areas For Further Study

This project opened up opportunities for further inquiry, including:

- Various types of interfaces which exploit advancements in technology.
- Wearable speakers: Onkyo AI is a proprietary voice-enabled AI system, created from the development and integration of several currently available AI-related technologies.
- Auto scroll features
- “Training” the AI to recognize different speech tones, voices, pitch, accents

The possibilities are endless when it comes to refining the AI voice recognition/command platform where people with disabilities will benefit from a platform that is conversational in nature. We have discovered based on our research that there is plenty of room for improvement.

AI voice recognition/command platforms existing today are not being used by a significant portion of this group of users with disabilities due to their lack of understanding tone, accents, volume, and different types of speech impairment.

Section Three: Top Insights (and supporting evidence)

1. Our participant’s physical disabilities hindered their abilities to efficiently navigate screen content, therefore we observed through various hacks and lifestyle adaptations, they were desperately seeking ways to improve their lives and fit into our world of technology.

   https://drive.google.com/file/d/1BhFAYGX1dBZg9p2bWwPBP4KLZ1JgqzfL/view?usp=sharing

2. They were frustrated with the small buttons and touchpads on their devices which caused frustration, even blaming themselves for the issues they had.

   https://drive.google.com/file/d/1mmT34TJh-Ly31b_USMCIU0iVQi8h4DIf/view?usp=sharing

3. They expressed a need and desire to have a more intuitive, responsive voice-controlled navigation system to search and discover content on Hulu as well as other streaming services

   https://drive.google.com/file/d/1-gZ2Vm9_V9CxoGgeuiYQJx7oSJ3Ytgim/view?usp=sharing

The frustration of our participants due to the lack of understanding by tech companies and the sense of being ignored about the difficulties they may have with comprehensible accessibility on their devices.

“Not using my hands would be great, aah! It would be so much easier”

“I have difficulty with my hands, it’s just easier to speak, the fact that it understood me (prototype)!”

“I’m so glad that you are helping people like me, because I don’t realize that I need more help that I am getting”

“A platform like voice recognition/command is just very helpful because of my eyes, I have just such problems with my vision, I’m not wasting my time looking for movies”

- Sophia

Section Four: Possible Design Briefs

- We want to continue exploring the possibility of integrating a more conversational type of communication with AI voice recognition platforms such as Alexa, Siri or Roku.

- Develop a wearable microphone audiolink or personal assistant that communicate voice commands to the hulu app or any voice recognition platforms that users might have access to in their homes.