Project Deliverable F: Prototype 1 and Customer Feedback

Mariyam Sheikh, Amélie Chénier, Michael Braimah,
Margaret Kravchenko, Luke Meintjes

November 3, 2024

Introduction:

Proper documentation when prototyping is essential, which is why this document outlines the first prototype of the smart glasses assistance app and different aspects. It includes a simple analysis of the prototype and its different critical components. Testing for this first prototype is also documented here. Feedback will then be collected and interpreted into possible changes to target specifications or to the design. Finally, a prototyping test plan for the second prototype follows.

1.

Link to prototype:
https://www.figma.com/design/VdlCXhpzuJy8DhBpEvhC2W/Prototype-1?node-id=0-1&m=dev&t=4fzo2t4bt46W2fgW-1

2.For this subsystem, the camera has a detection system built into it that can detect when obstacles are approaching. The object detection system will give a warning based on what the user desires. When an obstacle is approaching, a warning will be given. In the app, one can decide the method of the warnings (through speakers, vibration, and the screen); the user can select multiple options and can also turn them on and off. And be able to change and adjust the settings. Location: Connects to the GPS system and manually enters the location via a postal code. Connects to the sensor and the audio subsystem for direction assistance. Camera: The app can control brightness, zoom features, and has a night mode too.There is a lot of volume flexibility, and the subsystem is very adaptable for all two, as you can adjust the output of the distance in object detection, on the camera the brightness, and another "factor". Comprehensibility: in the camera section, there is an input in the app that is unclear for the user for adjustment. Integrability is able to integrate new technologies and new components and is capable of constant updates to improve accessibility features for users. Uniform comprehensibility is based on what people already know and what they're used to from experience, assuming they use technology that was created this decade. Very easy to adjust and learn.

3.

For the testing of the product we will only test the functionality of the prototype and not the non-functional requirements and constraints since we don't have any physical glasses for this prototype so we can't test it. So this is the different things we will test:

- Functionality - Test to see if prototype works
- Adaptability - Test to see if user can adapt to when the prototype changes
- Number of uses - Test to see how many clicks it takes to make a change

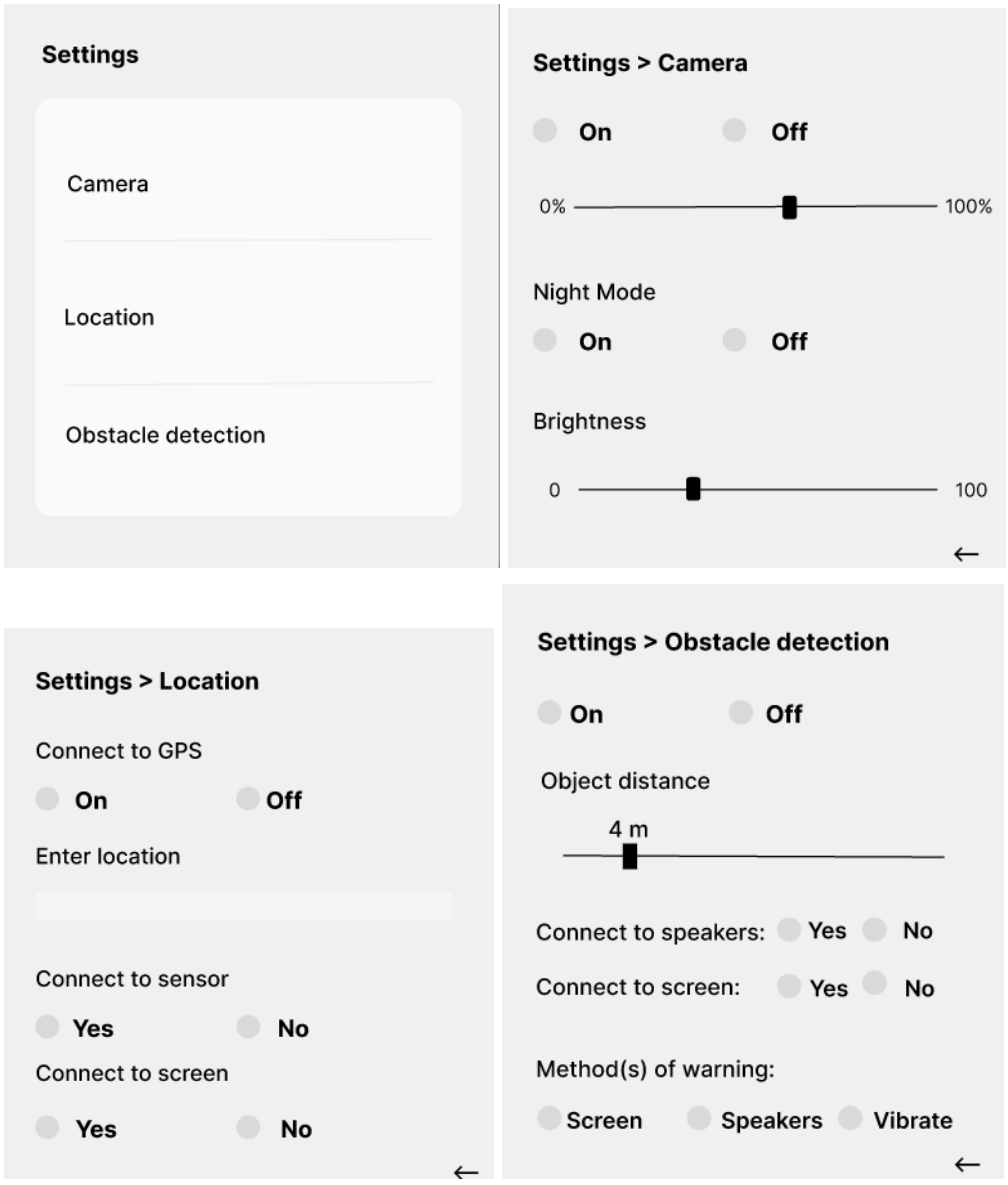
- Number of features - Check the amount of options are available for change
- Easy to use and understand - Survey users of prototype

Test:

Test type	Functionality	Adaptability	Number of uses	Number features	Easy to understand and use
Test results	Yes	Yes	2	3	Yes

Analysis:

For the functionality, when testing the product didn't have problems and functioned as intended. Then for adaptability, when a mistake was made the user can go back or undo it, and also there is room to add more functions to the prototype. Then for the number of uses, it takes 2 clicks to make a change in the settings. Next the number of features were 3, they were able to go to different settings menus, they were able to change a setting and finally are able to go back to the main menu. Lastly for the ease of use, the users were surveyed and we concluded that they were able to use it easily and understand it.



4.

Feedback and Comments

Mechanical Engineering Student:

- “The design is super user-friendly. The clean layout makes it easy to navigate too.”
- “One feature that would be awesome is if you could add a ‘quick access’ button for frequently used settings. That way, one can adjust brightness or volume without leaving the main screen.”

Electrical Engineering Student:

- “The controls are very responsive, I like that you can make adjustments quickly without a lot of extra steps.”

- “A quick-start guide could be nice, especially for features like notifications, but overall, its really intuitive.”

Mechatronics Student:

- “Great balance between functionality and clean design.”
- “Adding some unique colors for different icons would make each feature pop.”

Software Engineering Student:

- “The app is minimalistic; it is easy on the eyes and feels professional. I could see myself using it daily.”
- “I love the different functionalities of the product.”
- “A dark mode would be a nice addition for nighttime use, otherwise, it is great.”

Shabodi:

- “Great functionalities.”
- “Nice formatting of the app.”

5.

No updates required.

6.

Prototyping Test Plan

Testing Functionality

Method: By testing each feature if it works perfectly and as planned.
Duration: ~1 hour per feature
Timing: The tests will be conducted upon the completion of the first prototype.

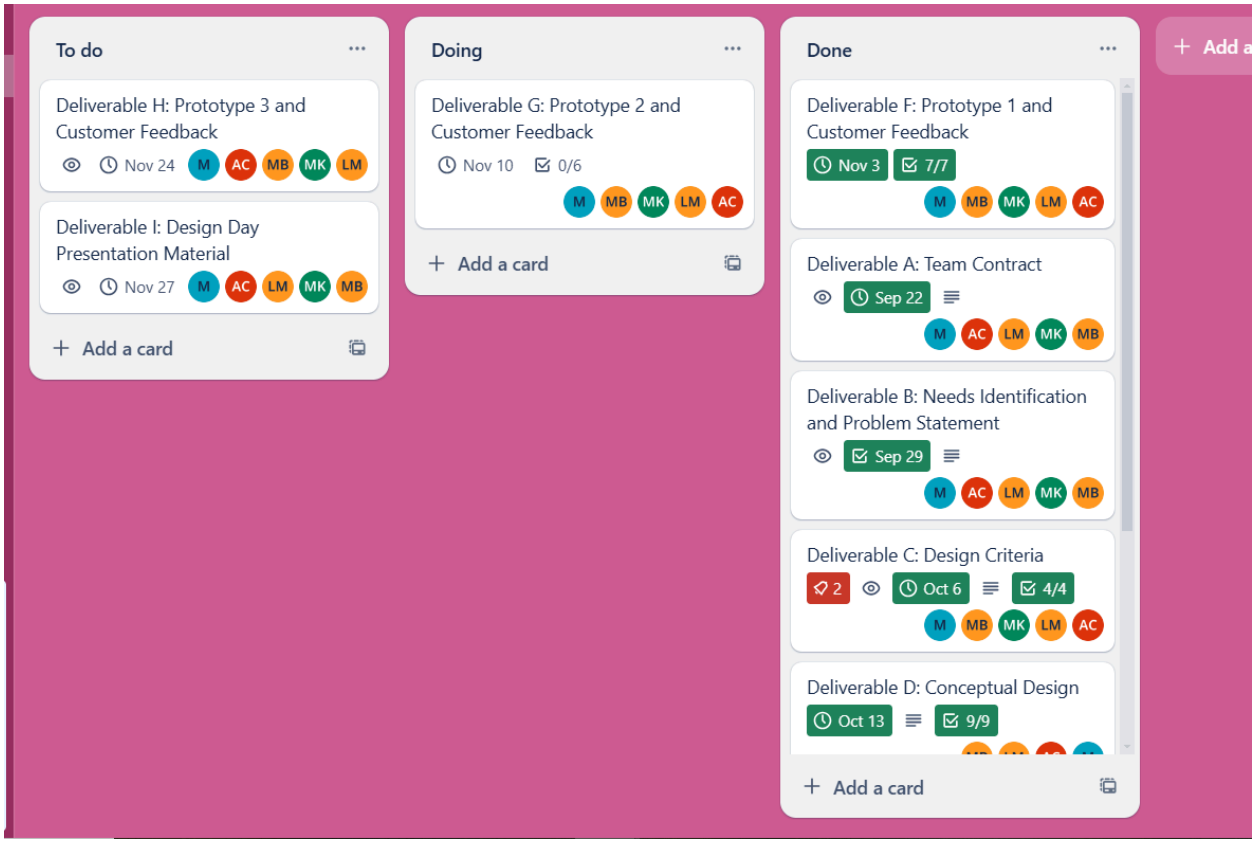
Testing Adaptability:

Method: Survey
Duration: 1 day
Timing: The tests will be conducted upon the completion of the first prototype.

Testing Understandability and Difficulty of Use:

Method: Survey
Duration: 1 day
Timing: The tests will be conducted upon the completion of the first prototype.

Conclusion:

While designing and sketching are critical to product design, prototyping brings us closer to the final product. The prototyping step of the Smart Glasses Assistance App allowed customers a chance to discover our ideas and give us important feedback in return. This feedback while it did not change any target specifications or the design of the app will remain critical to future prototypes.

Trello update