GNG2101: Deliverable B

Needs, Problem Statement, Metrics, Benchmarking and Target Specifications

Submitted by

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Table of Contents

1.0 INTRODUCTION

The goal of this deliverable is to identify the design requirements for the product, that is centered on the client's interpretive needs. These needs will enable the design team to create an application that will allow abled individuals to efficiently operate their house appliances, such as stove's, washers, dryers, and more household appliances. This deliverable will also include a list of translated and prioritized customer needs, metrics with associated units, and a problem statement. The benchmarking of similar products, a set of target specifications, and an overall reflection on how the client meeting impacted your results and process will be detailed in this deliverable.

2.0 CUSTOMER NEEDS

Table 1: Importance table for the clients needs with 5 being most important

Number	Customer Statement	Customer Need	Importance
1	The braille sticker labels peeled off the heat related household appliances leading to ineffective uses of the appliances.	The application will allow the user to effectively use household appliances without the use of braille stickers.	5
2	Buttons would be great for the application as many complications come with visually impaired people and touch screens.	The application will be equipped with buttons and sounds rather than fully relying on a touch screen.	4
3	The most commonly used appliances for this application should be stoves, washers, dryer, and other household appliances that require the use of knobs or buttons.	The application can be applied to a variety of household appliances	2

4	I want the application to allow them to use their household appliances individually without assistance.	The application will allow the user to be self-sufficient.	5
5	For beginners the application can be braille friendly.	The application will be equipped with Braille	1
6	The application needs to have a wide touch screen interface for individuals who have never used a phone before.	Buttons are large enough to press easily	2
7	There should be other platforms other than ones that rely on the use of a smartphone.	The application will be usable on different types of appliances	2

3.0 PROBLEM STATEMENT

The need exists to create a smartphone application to help visually impaired users control their household appliances easily without relying on other people.

4.0 METRICS

Customer Need	Metric	Units
The application allows the user to effectively use household appliances without the use of braille stickers.	Not braille reliant	yes/no
The application is equipped with buttons and sounds rather than fully relying on a touch screen.	Not touch screen reliant	yes/no
The application can be applied to a variety of household appliances.	Number of appliances compatible	Numeric
The application allows the user to be self-sufficient.	Can be operated by a single visually impaired person	yes/no
The application will be usable on different types of appliances	Multi Platform	yes/no

5.0 BENCHMARKING

The benchmarking for this deliverable has many different types of application with different uses. Aira is an app that connects a visually impaired person to a professional visual interpreter and they convey to them whatever they have issues with and that visual interpreter would assist them in any way possible. TapTapSee is an application that helps visually impaired people to identify objects through photos.

Table 2: Benchmarking our design Vissiolle against other simmilar products

	Importance	**Vissiolle**	**Aira**	**TapTapSee**
Cost	2	Free	Free	Free
Device Usage	3	Handheld Devices	Handheld Devices	Handheld Devices
User friendly	4	Yes	Yes	Yes
Human Assistance	3	No	Yes	No
Energy Consumption	1	Low	High	Low
Braille Friendly	4	Yes	No	No
Compatibility for different platforms	3	iOS, android, windows,etc	iOS, android, windows	iOS

Figure 1: Picture of Aira Application

Figure 2: Picture of TapTapSee Application

6.0 TARGET SPECIFICATION

Here is a list of all our target specifications we hope to achieve.

1. A household appliance control application with visually disabled assistance.
2. The device can effectively access and adjust most of the appliances at home.
3. Customised design and layout to adapt user's preference.
4. The software can be operated on iOS, Android platforms.
5. Voice control can be added to improve the usability of this application.
6. External buttons can be attached to the mobile device to improve the user's overall experience.

7.0 REFLECTION

The client meeting was successful overall. During this meeting, the team developed a thorough understanding about the concept of designing a touch-screen household-appliance control device for visually impaired individuals. It was discovered that the original touch-screen interface doesn't perform in her favorable way which causes issues on her daily basis. Instead, the client is looking for a more user-friendly application specifically for visually impaired users that can be run on iOS, android platforms, etc. The product could also feature physical braille buttons externally attached to the client's mobile device, in order to better assist the client to control household appliances. There was a major emphasis on it being user-friendly and adding physical buttons with sound to better fulfill the demand.