EyeBallin' Vision Document

Team Bob's Bullies

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Revision History

Name	Date	Reason For Changes	Version
Dane Erosa	12/2/19	Initial Implementation	1
Dane Erosa & Isaac Schultz	12/8/19	Final change review before submission	2

1. Business Requirements

Our client has reached out to us to create and produce a hands-free, voice-controlled navigation app that helps the visually impaired navigate indoors, as well as call or text an emergency contact if the user happens to fall.

1.1. Background

Throughout time, there has never been a dominant product to help the visually impaired navigate through buildings, and public places without being in the public eye. The capable products have been the White Cane, the Service Dog as well as a Caregiver. There has never been a product on the market to combine either of the White Cane or the Service Dog to optimize a solution to destination exploring.

1.2. Business Opportunity

There is a limited market for this specific product as the primary users of this product are the visually impaired. Although there are existing apps on the market like Microsoft's Pathways and Google's indoor navigation app, but those apps are very baseline and don't contain the voice activation feature as well as don't have tailored features for specifically the visually impaired. EyeBallin could potentially lead a new industry trend to a tailor more products to the visually impaired.

1.3. Business Objectives

The primary business objective for EyeBallin, is the target release date of the prototype app, which is December 8th of 2019.

1.4. Success Metrics

To measure the success for the EyeBallin App quantifiably, it will be determined by the percentage of routes that are deemed successful. The success goal is to have 98% of user routes to be deemed successful. A few of the key factors to help make this successful, is the speech to text transition that will receive a voice message from the user and insert that as the destination of the route. A sub-success goal is to have the speech to text of 100% accuracy. Another big factor that plays into the route, is the location provider that correlates itself with the graphs of the floors that the team has currently built. Without that, the route wouldn't work.

1.5. Vision Statement

We at EyeBallin, are looking to change the game when it comes to indoor navigation and gps for the visually impaired. Our hope and desire is that the app we release takes the world by storm. One of the biggest benefits of EyeBallin, is that it is completely hands free. It can be used by itself or used with a service dog or white cane to achieve the best results.

1.6. Business Risks

The business risks that are associated with the development of EyeBallin are mainly branding issues and user acceptance. It's not one of the trusted apps out there and it takes time to build a brand.

1.7 Business Assumptions and Dependencies

One of the major dependencies the project itself relies on for success is the accuracy of the graphml graphs that are used for each floor design. One of the major assumptions on receiving the project itself from Bolong was that the team could import a google indoor-map api of the WSU Everett building. However, since the building is relatively new there is no indoor map of the building so an alternative route had to be established during the process after lots of trial and error.

2. Scope and Limitations

2.1. Major Features

The major features of the EyeBallin app include:

1. It is hands free.
   - No other navigation app is currently hands free on the market.
2. Completely voice driven.
   - Can skip any manual text input features using voice commands.
3. Complete navigation from point A to point B
   - No applications currently navigate the WSU Everett Building.
4. Immediately notifies emergency contact in an accidental fall.
   - SMS and voice calls after 10 seconds of no voice response from user.

2.2. Scope of Initial Release

The scope of the initial release will include the four major features listed above in section 2.1. A user will be able to say or enter a destination in the EyeBallin app and a destination will pop up in the Washington State University Everett building. What's beneficial for the community, is the possible networking that coexists with users possibly not knowing a location or a room, but someone around them might know it, leading to a possible interaction. The route detection through the EyeBallin app will generate the shortest path, meaning it will get the user the quickest route without any added unnecessary detours. If for some reason the user does fall, the EyeBallin app will give the user 10 seconds to respond before contacting the users emergency contact. These features are especially beneficial to users at Washington State University Everett, because the users are most likely students. Students are often lacking for time, and the most direct route to where they need to go is essential.

2.3. Scope of Subsequent Releases

Possibly future evolutionary updates to EyeBallin for Phase III:

- Implement an object detection feature that detects objects in a cone like radius in front the user.
- Accurately gather user location using a combination of Wi-Fi, GPS, and Cellular location data.

2.4. Limitations and Exclusions

Limitations that the stakeholder could expect but are actually not feasible in time of release are:

- Navigation in/out of a room after the user has reached their destination.
- Accurate user location within a building (physical limitation of GPS signal strength).
- Multi-language translator for directions.
- Internal maps of each building navigable by the app must be created.

3. Business Context

3.1. Stakeholder Profiles

The benefits of the stakeholders for EyeBallin product development include:
- Better focus on design
- Reduced work due to communication and testing.
- Improve usability or reduce frustration level in comparison to current apps.

Stakeholder	Major Value	Attitudes	Major Interests	Constraints
Bolong	Oversee expectations	see product development lifecycle and critique it.	Connect with team at each milestone. Give feedback on progress.	Oversees many teams, limited availability
Visually Impaired Users	Use of app	highly receptive, but expect high usability	automatic error correction; ease of use; high reliability.	Visually impaired
EyeBallin Team	Produce the app	Highly receptive, as the team is taking direction from Bolong.	ability to handle a location mapping system. Calculate route class. Create required documents.	Limited training with Android Studio

3.2. Project Priorities and Constraints

Schedule:

Prototype delivery is scheduled for 12/8 at 11:59pm. Will the prototype will come most of the features from the original scope of the project.

Project Requirements

- Hands free, ultimately voice driven.
- Be used as a primary or an accessory source of routing a user to a destination.

Constraints

Due to time constraints, the team was not able to handle object detection for this release as originally planned.

Dimension	Driver (state objective)	Constraint (state limits)	Degree of Freedom (state allowable range)
Schedule	release 1.0 to be available by 12/8, release 1.01 by 12/13		
Features			70-80% of high priority features must be included in release 1.0
Quality			90-95% of user acceptance tests must pass for release 1.0, 95-98% for release 1.1
Staff		maximum team size is 1 PM, 2 developers + 2 technical documenters	

3.3. Deployment Considerations

To ensure the most optimal solution for a successful deployment of the EyeBallin app, the team will continuously SCRUM bi-daily on requirements that are in the process of being completed. Then Agile-Sprint until each deliverable is completed. Once deployment is enacted, the app will be specifically in the Pacific Time Zone, and as of right now in one location that is Washington State University Everett. Users will have access to all of the current features without delay or updates. There are no current updates scheduled, so there will be no interruption in use.