CPTS 484 Software Requirements (Fall 2019)

Visually Impired Assistant App

Software Project Management Plan

Submitted to:

Dr. Bolong Zeng
Clinical Assistant Professor and Program Coordinator,
School of Electrical Engineering and Computer Science,
Washington State University at Everett,
Everett, WA- 98201

Submitted by:

Team Cyclops

1. Sarakvitou Sam
2. Levi Cline
3. Alex Puga
4. Chris Nguyen
5. Brandon Le
6. Joshua Bennett

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1. Introduction

1.1. Project Overview

The Software Project Management Plan (SPMP) includes the planning, organization and students that are creating the Visually Impaired Assistant App. This plan provides examples on how the project will be managed and it also defines the deliverables, schedules, and dependencies.

The application itself will have two main modes a guidance mode and an Assistant mode. The guidance mode is the screen directions for the visually impaired and the assistant mode which is an easy to set up process with a GUI and the ability to type in a destination and finding the options of routes available to the user.

1.2. Project Deliverables

The following are the deliverables for this project:

Iteration	Deliverable
1	Preliminary Project Plan
2	Requirements Elicitation
3	Requirements Analysis
4	Architectural Design
5	Component/Object Specification
6	Implementation
7	System Testing
8	User Documentation

1.3. Evolution of this document

This document will be updated as the project progresses. Updates should be expected in the following sections:

- 1.4 References
- 1.5 Definitions, Acronyms, and Abbreviations
- 3.2 Assumptions, Dependencies, and Constraints

- 5. Work Elements, Schedule, and Budget

1.4. References

[To be added later when there are citations in the documents]

1.5. Definitions, Acronyms, and Abbreviations

OO	Object-Oriented
SE	Software Engineering

2. Project Organization

2.1. Process Model

The process model to be used by this team will be a spiral model. After each phase the team will reassess if requirements are met and create a prototype accordingly. Test driven development will be utilized to ensure implementations are added correctly.

2.2. Organizational structure

Each phase the team will split up into 2 groups of developers to increase productivity and improve communication. Meetings for each sub-group will be determined per team. Members of each sub-group will be rotated with new members every 2 weeks. A mobbing programming style will be practiced, and the driving time is 7 minutes. The goal of this rotation style is for more exposure with different members' programming styles and ideas. With mobbing, the driver will focus less on thinking and typing simultaneously to reduce time allotted towards typing errors.

2.3. Organizational Boundaries and Interfaces

Project Liaison/Leader: Sarakvitou
Initial phase teams:

Team 1	Team 2
Chris Ngyuen	Sarakvitou Sam
Alex Puga	Joshua Bennett
Brandon Le	Levi Cline

2.4. Project Responsibilities

Each team during every phase is responsible for the work assigned. Similarly, each developer in a team is responsible for the work assigned to them. Members are to work together as a team to ensure success is achieved as a whole.

3. Managerial Process

3.1. Management Objectives and Priorities

The main objective of the management position is to help maintain an efficient structural group. Management will help distribute the workload among all team members as fairly as possible, unless otherwise agreed upon. With this in mind, the team expects to discuss and come to a mutual agreement with the majority of the teams work, issues, meetings,and questions or concerns. If any problems arise, management will have the final word of the problem.

The team's priority is to deliver an easy to use product. As a group, standards of the given specification while focusing on the priority will be met.

3.2. Assumptions, Dependencies, and Constraints

There are certain requirements that are assumed to be available to the user and the phone. The project assumptions are listed below:

- Building maps, i.e fire code maps
- Text-To-Speech is available on the device
- Voice recognition
- Phone comes with a camera
- Phone has GPS accessibility
- User has an assistant to setup emergency contact info

There are certain dependencies this project will have. The project dependencies are listed below:

- Reliable network or service
- Accurate and up to date building maps

There are certain constraints the project will have. The constraints are listed below:

- Detect oncoming small objects
- Detect if a pathway is closed
- Detect if a room is occupied
- Detect if a door is open or closed

3.3. Risk Management

No.	Risk	Type	Likelihood - Impact	Description
1	Requirements Change	Technical	Likely - High impact	The requirements change at a certain point of development.
2	Gold Plating	Technical	Likely - High impact	The project team adds their own features.
3	Project team misunderstand requirements	Communication	Likely - High impact	The requirements are vague and/or are misunderstood.

3.4. Monitoring and Controlling Mechanisms

No.	Risk	Monitoring and Controlling
1	Requirements Change	● Attempt to make sure stakeholders is clear and certain of their requirements. ● Develop project so changes are easily added or removed.
2	Gold Plating	● Communicate with developers to not add additional features.
3	Project team misunderstand requirements	● Having strong communication with team. ● Unanimous understanding of the problem to be solved along with a way to solve the problem.

4. Technical Process

4.1. Methods, tools, and techniques

Team meeting:
As it stands right now the team will have 2 meetings weekly. One at 9:30 am -11:15 am on Monday. The second being in the later afternoon wednesday evening at
6:00 pm - 7:30pm. The liaison is responsible for setting up meeting with Dr. Bolong Zeng when necessary.

Metrics:
Every member is responsible for their portion of the project. The following should be maintained

- The requirements for the project shall be maintained. Any changes shall be discussed within the team if a consensus is reached than changes will be made.
- The spiral process model should be followed.

Configuration :
The project will be maintained using Git for version control and every member should keep track of changes made. It should be noted that any changes made should be documented for future references.

4.2. Software documentation

Software documentation will be completed when each phase is completed and backed up the group shared Google Drive, and Git repository.

4.3. Project Support Functions

Project support functions will be documented as they arise during the course of the project and backed up the group shared Google Drive, and Git repository.

5. Work Elements, Schedule, and Budget

This project is scheduled to be completed by 12/8/19 for the final demo. Here is the outline of the timeline of the Phases of the project:

- Project Phase 1: Preliminary Project Plan due by 9/8/19
- Project Phase 1: Checkup meeting due the week of 9/16/19 - 9/22/19
- Project Phase 1: Final submission/presentation due the week of 10/7/19 - 10/13/19
- Project Phase 2: Checkup meeting due the week of 10/28/19 - 11/3/19

- Project Phase 2: Final submission due the week of 12/2/19 - 12/8/19

The team will be meeting weekly for discussion on Mondays and Wednesdays.
There is a team of 6 Members separated into two subgroups of three that rotates every two weeks.
This document will be modified if needed during future phases.