WSU WayFinding Test Plan

Software Goals

1. Support the users to find a room in building.
2. Support the users to navigate the building with live interaction.
3. Support the users to report an issue in a building.
4. Support the users to share live location to their friends
5. Support the users to share an event a building.
6. Support the users to see how much crowded a building is.

Research Questions

1. Can users see the map of a building even when there is no internet available?
2. Will users understand WSU WayFindings's overall conceptual model?
3. Will users be able to understand the directions that the app is providing them?
4. Can users access every core task within two clicks?
5. Can users see the navigation information from the application quickly and easily through the "Directions" mode?
6. Will users find WSU WayFinding to be easy to use, easy to learn, and useful?
7. Will the usability and user experience requirements we have established for WSU WayFinding be met?

Participants

Profiles

We will recruit participants who represent potential users of WSU WayFinidng. These users should meet the following requirements:

- Must have experience with how to use a smart phone.
- Must have experience how to use google map or any other map that are available on smart phones.
- Must be a student or stuff of Washington State University.

Recruitment method

Participants will be recruited through word of mouth. Members of the design team will contact friends and acquaintances who might meet the above criteria. Each potential participant will be questioned to ensure that he or she meets the above criteria. When a potential participant has been identified, we will schedule the participant for a mutually agreeable time slot.

Number of participants

We will recruit five total participants. Two of these will be backup participants if a participant backs out.

Test sessions

Location

Usability test sessions will be held via Zoom. If we can reach to a time slot which is suitable for both of us and the availability of WSU Usability Lab, we will try to conduct at least one test session on WSU Usability Lab.

Length and structure

Each test session will last approximately 25 minutes. It will include the following activities:

1. Greet participant (1 minute)
2. Read and sign informed consent form (3 minutes)
3. Complete background questionnaire (3 minutes)
4. Read study instructions (5 minutes)
5. Complete study tasks (10 minutes)
6. Complete exit questionnaire (3 minutes)

Data Collection and Analysis

- We will record all study sessions for post hoc analysis.
- We will log critical incidents as they occur in each session, and by reviewing the video recordings. This will allow us to identify usability problems and propose possible solutions.
- We will time how long it takes participants to perform each task, and how many errors occur. This will allow us to assess the extent to which our prototype meets the usability requirements we have established.
- We will collect background questionnaire data. These data will help us to interpret our results.
- We will collect exit questionnaire data. The exit questionnaire will include questions that will allow us to assess the extent to which our prototype meets our user experience requirements. It will also provide us with qualitative data on our participants' impressions of, and experiences with, our prototype.

Qualtrics Survey

Link to your team's Qualtrics survey that includes informed consent form, background questionnaire, study instructions, study tasks, and exit questionnaire:

https://wsu.co1.qualtrics.com/jfe/form/SV_8ujEHLERRwe5AcS

Informed Consent Agreement to Participate In Usability Study of [name of your software]

[Your group members' names, separated by commas]
School of Electrical Engineering and Computer Science
Washington State University

Description of Study: You, _____ have been asked to participate in a usability test of new software created as part of the above persons' (henceforth, "the researchers") course project for CptS 443/543 at Washington State University. Your participation in this usability test will help the researchers to better understand the software's strengths and weaknesses. You have been asked to spend about 25 minutes participating in this test. This will involve your doing some or all of the following things:

- Reading aloud and studying brief task descriptions.
- Interacting with a computer.
- interacting with the researchers and/or other students.
- thinking aloud (explaining what you're doing and thinking), and
- filling out questionnaires.

The researchers will record the session on videotape. Although your voice, and possibly your face, will appear on the recording, your name will not be on the recording. The recordings will be viewed only by the instructor and students affiliated with CptS 443/543 at Washington State University in order to fulfill a course requirement. When the researchers describe their work to the class, they will not use your name.

Risks and Benefits Expected: The study will not incur any risks beyond the minimal risks associated with interacting with a computer. The study is not expected to help you directly. The results may help the researchers to improve the design of their software.

Confidentiality: Any information about you that is obtained from this study, including what you say, will be confidential. Your real name will be kept in a locked file and only the researchers will have access to it. Only your code name will be on the videotape and in reports of the study.

Right to Refuse or End Participation: You may refuse to participate in this study or stop participating at any time.

Certification: By signing below, you certify that you have read and that you understand the foregoing, that you have been given satisfactory answers to your inquiries concerning projects procedures and other matters, and that you have been advised that you are free to withdraw your consent and to discontinue participation in the usability test at any time.

You herewith give your consent to participate in this test with the understanding that such consent does not waive any of your legal rights, nor does it release the researchers or any agent thereof from liability for negligence. You understand that you shall remain anonymous in all written and verbal reports of this test. You will be given a copy of this form to keep.

Signature of participant Date

Signature of researcher Date

(If you cannot obtain satisfactory answers to your questions or have comments or complaints about your treatment in this test, contact Professor Daniel Olivares, Washington State University, daniel.olivares@wsu.edu.)

Background Questionnaire

1. What is your employment status?
2. If employed, what do you do? If in school, what year are you and what is your major?
3. How often do you use Google Maps?
4. How much experience do you have with testing mobile applications or user interfaces with users?
5. How much experience do you have with Android or Apple Smartphones?
6. Which software you use the most for navigation?

Participant Instructions

Thank you for agreeing to help us with this usability test. We sincerely appreciate your time and effort!
WSU WayFinding is a mobile-based software that enables you to find a room in a building. When you enter a WSU building, you will be able to see the blueprint of that building. There will be a search box for searching a room. You can also share your location to you friends using the mobile app. You can share an event and report an issue through the application. There is another feature named heatmap which will show you how crowded a building currently is.

In today's test, you will use WSU WayFinding to search for a room, share your location, share an event, report an issue and viewing the heatmap of Sloan building. We expect that you will need somewhere around 10 minutes to work through the tasks.

As you participate in today's test, please keep the following points in mind:

- We are testing the software tool, and *not* you! Your interaction with our software will help us to better understand our software's strengths and weaknesses, so that we can ultimately improve the software's design.

- You are free to take a break at any time.

- Before beginning each task, please read all written instructions aloud.

- When you are finished with a page of instructions, please do not advance to the next page until you are instructed to do so.

- **If you are working alone**: Please read each task aloud before you begin. As you work through each exercise, please **"think aloud."** Let me know what you are up to by verbalizing your thoughts and actions. In addition, please share any opinions, questions, or concerns that come to mind. If, at any point, you become silent, I will remind you to continue thinking aloud.

- **If you are working with a partner**: Please read each task aloud before you begin. As you work through the task, you and your partner should work together as a team. Actively engage in a conversation with your partner. Inform each other of what you're up to. As you work, I may ask you questions about why you have done something or how you feel about some part of the system. This will help me to better understand what you are doing.

- Have fun!

Please await further instruction before going on to the next screen.

Background

You are a Freshman at WSU and are going to do a major in Computer Science. You are going to attend your first ever class, but you don't know the directions to your classrooms and labs for lectures. Your friend John discovered this navigation app like google maps but for navigating the indoors of buildings inside WSU campus. Using this application, you can get plethora of information about a particular building. Information such as finding out about the size of crowd in a particular room, office hours of professors, TAs, distance from your current location to a target room or a lab, sharing your current location, reporting a issue about a room, etc.

In the tasks that follow, you will use WSU Wayfinding to navigate Sloan Hall and try to reach a classroom. Use the following link to access the prototype:

https://www.figma.com/proto/oQcr8zzOXDkLGGDDTlxOa8/Low-Fidelity-Prototype?node-id=68%3A154&scaling=scale-down&page-id=0%3A1&starting-point-node-id=68%3A16&show-proto-sidebar=1

Launch WSU Wayfinding and try to complete the following study tasks.

Please await further instruction before going on to next screen.

Access the Software

You will use WSU Wayfinding to navigate Sloan Hall and try to reach a classroom. Use the following link to access the prototype:

https://www.figma.com/proto/oQcr8zzOXDkLGGDDTlxOa8/Low-Fidelity-Prototype?node-id=68%3A154&scaling=scale-down&page-id=0%3A1&starting-point-node-id=68%3A16&show-proto-sidebar=1

Please await further instruction before going on to the next page.

Task 1

In WSU WayFinding app, you can find a room in the building and directions to reach that room. Initially the application will ask you for username and password. For demonstration purpose, the username and password are given in the prototype. Log in with the given credentials and enter the Sloan building. Now, search for Sloan 155 room and ask the app for the directions.

Please await further instruction before going on to the next page.

Task 2

Suppose some of your friends are coming over to meet you in Sloan building. They have never been in Sloan building. You want to share your location with your friends so that they can easily find you using the WSU WayFinding application. Share you location via WSU WayFinding app.

Please await further instruction before going on to the next page.

Task 3

Now you are passing by a room and saw that there is free food event organized by the architecture department. You get some food and want to share this event with others who are in the building now. Share the event with WSU WayFinding app.

Please await further instruction before going on to the next page.

Task 4

You are studying in a room in Sloan building. Suddenly, you saw the lights were automatically turned off. You have tried to turn off and then on the switch again. However, it did not work. You want to report this issue to the authority of the building. Use WSU WayFinding to report this issue.

Please await further instruction before going on to the next page.

Task 5

You want to give a demo presentation in a classroom for practice. However, you do not know which classroom is empty now. Use WSU WayFinding application to find a room a which is currently empty.

Please await further instruction before going on to the next page.

Exit Questionnaire

Congratulations! You have completed all tasks in this usability test. Before you go, we'd like you to complete an exit questionnaire that elicits your opinions on the software you just used.

Thank you for your participation!

Exit Questionnaire

1. On a scale of 1 to 10, with 1 being "very difficult" and 10 being "very easy," how would you rate the ease of use of WSU WayFinding?
2. On a scale of 1 to 10, with 1 being "very difficult to learn" and 10 being "very easy to learn," how would you rate the learnability of WSU WayFinding?
3. On a scale of 1 to 10, with 1 being "not useful at all" and 10 being "very useful," how would you rate the usefulness of WSU WayFinding as a tool for navigating buildings across campus?
4. Did you find any of the tasks to be confusing? Which ones? How would you change the tasks to make them easier to understand?
5. What did you like about the application you used? Were there any features that you found particularly useful? Why?
6. What did you not like about the application you used? Were there any features that gave you grief? Why?
7. If you were designing this application, how would you change it so that it worked better for you?
8. Is the application you used something that you could see yourself using again? Why or why not?