CptS 443/543: Low Fidelity Prototype Study Result

Team Members' Names:

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Participants:

Participant 1:

Participant 1 is a graduate student in Material science department at Washington State University. He is a Bangladeshi and identifies as male. He is 25 years old, and he is working as a research assistant. His hobbies are playing table tennis and badminton. He also plays other sports as well. He is a sports lover. He goes into the university recreation center almost every day to play tennis or other sports. He represents the prospective users who love sports.

Participant 2:

Participant 2 is a graduate student in Civil Engineering at Washington State University. He is a Bangladeshi and identifies as male. He is doing his master's in civil engineering. He is 26 years old, and he is working as a teaching assistant. His hobby is playing guitar. He tried to attend the musical programs in the university and perform some traditional songs. He represents the prospective users who love music.

Participant 3:

Participant 3 is a graduate student in Chemical Engineering at Washington State University. He is an Indian and identifies as male. He is doing his PhD in chemical engineering. He is 26 years old, and he is working as a research assistant. His hobby is traveling. Since he is busy in the weekdays for his research work, every weekend he went out to explore new places. He may represent the prospective users who love to travel.

Procedure:

Venue and Duration:

Our study sessions were conducted in person. We have first given an instruction set and an overview of what the participant can expect from the initial prototype. Each study session took approximately 10 -12 minutes. For participant 1, we have conducted the session in his office room at Sloan Hall, for participant 2, he also had office house hours in Sloan, but he prefers PACCAR building where he generally researches. For participant 3, we have also conducted the session in PACCAR building. The instruction set is added at the end of the document (Instructions).

Study sessions:

At first, we give the participants the instruction set so that they can have some idea their required task. Participants read the instruction and ask us question if they have any confusion. This part took an average of 5 minutes for each participant. We have ensured them the design will be like a mobile application especially like a google where vertical and horizontal scrolling is available for navigating through the map. Users start using the application and try to complete the five-core task. This session took average of two minutes. We have monitored them during this time carefully and took notes. At the end of the session, we have asked for their feedback. During the whole time, two of us took notes.

Key findings:

The study session was helpful to us. We have some interaction related issue which was not implemented by Figma. Some of these findings are not fixed since that was not the main purpose of our study session. The Figma related issues are addressed below:

- Participants tried to zoom in and zoom out option.
- Participants tried to access the input field.
- Double tapping on the map.
- Animation like the live location moving.

Although we have mentioned in our instruction set that user can not enter any input, user tried to access the input field because they look very similar to the real workable user interface. The above problems require more advanced design Figma which is not the main focus of our this study. Figma also provides a single interaction on a specific action like if put a interaction on “tap”, we can define only one type of interaction on “tap”. To define another small interaction, it is complicated to implement that small interaction.

We have got many insights from the user when they were interacting the application. Later we have asked them questions regarding those user interfaces, and what they were expecting from that user interface. The key findings from the study session are given below:

- While exploring the heatmap feature of the application, participant 1 spend good amount of time on that user interface. We have asked him later whether he was looking for anything. He mentioned that although he has the idea what green and red area mean in the heatmap. It would be better if we could have added a scale showing which color palette indicating the mapping of the colors like green means not crowded and red means crowded.
  We have added a color palette at bottom of the map to indicate which color represent what status.
- While searching for a room, Participant 1 tries to access the direction button that is presented in the overlay. After searching for a room, the map is redirected to the room the user searched for. If user click on text “Sloan 155”, an overlay is opened, and the details of that room is shown. At the end of the overlay, there is a direction button and it is not working. When the user first shown the room with out the overlay, there was also a direction button which is working. However, we forget to add interaction with the overlay button.
  We have added the interaction and the direction button on the overlay is also working.
- Participant 2 tries to exit while the application is showing the direction. Once the user clicked on the direction if the user does not reach to the destination, there is no way to cancel the direction window.
  We have added a button to exit the direction user interface.
- Participant 2 mentioned when he is trying to share an event, he feels like there should be a field where user can put the event name. We detect this because user was trying to scroll up and down for more options.
  We have added a new field called “Event Name” in the application.

- Participant 2 suggested that there should be a severity field to indicate the importance while reporting an issue through the application. We have also detected this because participant 2 was searching for more options.
  We have added a priority field in “Report Issue” UI.
- Participant 3 did not understand the full meaning of the icon of staircase while the application was showing path. He realized that is something to do with stairs. However, it was not clear to him why there is a flat line beside the icon. We detected this confusion when he was trying to click on the staircase icon on the direction interface.
  We have added a “No” symbol to indicate that the path is not available.
- Participant 3 informed us that there are only two mediums available for navigating the building: walking and staircase. However, most of the buildings have multiple lifts.
  We have added a lift symbol to indicate that if there is a path that can be used through lift that will be shown after clicking on that icon.
- Participant 3 indicates that while sharing the location via application, there are only limited options like messenger, mail. Sometimes user needs to share link other than these mediums. It would be better if a share-able link present in the user interface so that user can copy the link and share it to their convenient medium.
  We have added a new field where the link will be available for copying purpose.
- Participant 3 indicates that while the app is showing direction it would be better when turning a corner, it gives some prompt like “move left” or “move right”. We realized that participant 3 wanted to see more user interfaces while the application is showing a path. He mentioned that users may not always want to keep an eye on the mobile and may use ear buds to get the directions.
  We have added additional UI to show that when a user comes around a corner, the application shows a prompt like “move left”.
- Participant 2 mentioned that it would be better if a user enters a building and see all the events that is happening in that building. This participant was looking for other options in the main menu and we came to learn about requirements that way.
  In our requirement gathering report, we have mentioned this requirement. We will add an option to view the events of that building in next prototype.

Instructions

WSU WayFinding is a building navigation application which will help students and stuffs to navigate in the building without any assistance. We are presenting a low fidelity prototype and the design and implementation of application is in rudimentary state. Your feedback and suggestions will be helpful for us to build a more user friendly and efficient application. While using the application, please remember the following notes:

- Inputs are already given, and you cannot enter or type anything on the application. This initial phase design is only showing the flow of the application.
- Only five core features are implemented in WSU WayFinding. Instruction to use these features will be given in the next section.
- This is not a fully developed application. This is only a prototype of an application. Many advance functionalities may not work as you expected.

Five core features that can be done using the initial prototype:

- Finding a room in a building and get the shortest route to that room.
- Location sharing to a friend.
- Share an event
- Report a problem or issue of a room.
- Heatmap of the building.

Instructions to complete the five core tasks:

1. Finding a room in a building and get the shortest route to that room.
    - Click on the search button.
    - "Sloan 155" will be shown on the search box. Clicking on the search icon will show the room location and detail.
    - If user pressed on the "Direction" button the direction will be shown.
2. Location Sharing to a friend:
    - Press on the profile icon on top left corner.
    - Click on the "Location Sharing" option.
3. Share an event:
    - Press on the menu icon on top right corner.
    - Press on "Share Event"

4. Report a problem or issue of a room:
    - Press on the menu icon on top right corner.
    - Press on “Report a Problem”.
5. Heatmap of the building:
    - Press on the menu icon on top right corner.
    - Press on the “Heatmap”