Team Rocket

CSCC10H3 Project Phase II

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1. Initial Task Analysis/Descriptions:

These are the 5 descriptions based on the problems or solutions conceptualized from the analysis in phase 1.

Task 1- Running A Tutorial:

One of the five tasks the user should be able to perform is to run a tutorial on the website. To run a tutorial on the system, a user would need to locate the button that runs the tutorial. It is beneficial to the new users because they would need instructions to understand the system's interface. One of problems discussed in phase 1, regarding the tutorial button is: the location of the button. It is located at the bottom right of the screen, which is not in the vision of the user. When the button is pressed, a different screen pops up, showing the user information about the main elements on the home screen.One of the main components of usability is learnability, which states how "easy it is for an user to accomplish basic tasks the first time they encounter the design" (Nielsen, 2012). However, the tutorial button is located in such a place where the user has a difficult time trying to find it.

Task 2 - Searching On The Map:

Another simple task is to locate a certain address/destination. A user has the choice to go to the search bar and type in an address, which the map would then display a zoom-in section of the location. One of the possible features, from this task, is to zoom-in and out of the map to view the places around. While the user decides to search for a specific address, there will be an auto-complete list that will be displayed under the search bar that shows either the full address or address with a similar input as the user's address. However, based on Triplinx's design interface, there are two search bars on the website. This causes confusion to the user because they don't know which search bar to use. The first search bar is on the top right, which does the task of search on the map. The second search bar, located on the bottom left, gives the user the option to search anything on the website itself. One of the biggest problem with this task is the search bar, as this system has two search bars and there can be confusion caused by the user on which search bar to use.

Task 3 - Getting Around From Point A To B:

The main point of Triplinx is to plan trips in the city. The user tries to find a route from one location to another. This task requires the user to enter a location on "Start" bar (located under the Trip Planner), and enter the destination location under "End" bar (located under the Start bar). Once the information has been entered, the user will be provided with multiple route options to take. Once a user selects which route option (bus/subway-line number) to take, that option will be highlighted, and the user will have to click on the "Plan Trip" button on the left hand side, to get the selected direction specifications. This involves the highlighted route the bus will take and the estimated time and the estimated distance.

Task 4 - Information about Transit Services:

Finally, this system provides a task to switch between different transit service, in case a user is required to use different services. A user can look at the top tab called "Transit Services" located beside "Getting Around". Putting the cursor on the "Transit Service" will give the user a classification of different transit services (transit services, and paratransit services). For example, some of the services include TTC, MiWay, Brampton Transit etc. From there on, when the user selects one of the services, a new page is shown with a basic explanation of all the information about the transit service. It also provides a list of connecting transit services which involves information about the services, and which services will connect to the current transit service(For example if a user selects Go Service, it will have a list of other connecting services, such as Brampton Transit Service, TTC, Durham Transit, etc).

Task 5 - Opening The Map In Safari :

A generic but a simple task a user can perform with this system is to open up the map in a browser, which can either be Safari or Google Chrome. A user open up Safari(which runs on Mac iOS), and type triplinx.ca. Once the user has been taken to triplinx.ca, a user can perform any of the above tasks which involves searching for an address, running a tutorial for the system, or finding directions from point A to B. For a user to achieve all this, a user simply has to open up the system on their device to see the map rendering. A problem that was discussed with this task is the map rendering that it cases on the Safari web browser.

2. Techniques for User Requirements

The technique, used to gather data for this phase, is surveys. Using surveys are easier and less time-consuming to obtain information. There are more advantages to this method since it can either be closed or open ended questions. Closed questions are easier to analyze and may be distributed and also analyzed by computer which is beneficial regarding a greater audience and more responses. It can also be disseminated by paper, email and through social media (Preece, Sharp, & Rogers, 2016, 206). Having surveys are relatively easy and quick to distribute amongst the audience with just one link or giving it out to the needed audience and that way answers are quick to receive. The time required for data analysis is reduced and errors can also be corrected easily.

- The technique for the surveys is having different questions of the questionnaire for different population (Preece, Sharp, & Rogers, 2016, 206), since there are different age groups and different types of users (first time users or everyday users) this will provide with better and accurate information needed for the overall project.
- The impact of a question can be influenced by question order (Preece, Sharp, & Rogers, 2016, 206), normally when doing the survey the questions that are given earlier on can influence how an individual will answer the questions throughout the survey. So for instance, during the survey, if an individual is given a complicated question in the beginning then the individual will think about the rest of the survey as equal difficulty and the answers will be unbalanced. Hence, the decision to divide the survey was based on first time or regular users so it wouldn't confuse either of the user if their own version of survey is given and the questions will be asked accordingly.

- Providing clear instructions on how to complete the questionnaire, when providing instruction clearly it'll be easier for the individual to answer the questions in a mannerly way.
- Avoid very long questionnaires (Preece, Sharp, & Rogers, 2016, 206) - so it wouldn't confuse the audience with tons of information and it would also make them careless when reading the questions which would make them skip the words and would provide inaccurate information. Thus, on the survey it was decided to make the questions short and concise which will make the audience answer the questions appropriately.
- Deciding on whether phrases will be all positive, all negative or mixed (Preece, Sharp, & Rogers, 2016, 206) - the phrases as shown in the survey is mixed since it is preferable to gather the data based on design, contents, user satisfactions, attaining the data needed for future improvements if needed.
- The other technique is the format of the essay, whether is it a 'Yes' or 'No' checkboxes, checkboxes with many options, rating scales, semantic scales - 3,4,5 or more points, open ended responses (Preece, Sharp, & Rogers, 2016, 207)- The type used is a mixture of all the format depending on the questions asked in the survey, sometimes it is required to implement different types of format in order to attain accurate and more information instead of the standard 'Yes' or 'No' checkboxes.
- Implementing anonymity in a survey is crucial as it will get the audience to feel more confident when writing their answers knowing that their identity wouldn't be known. Many users might feel the need to not provide any negative responses if there was no promise to anonymity.

The survey will help the research question/overall purpose of the project by helps to figure out ways to come up with a solution or to contribute to the solutions for this project. And by using the data obtained from the survey the strategies can be formulated to gain a more effective solution for this project. As mentioned above the anonymity of surveys will allow respondents to provide with candid and detailed answers.

3. Types of Users:

The types of users selected vary in terms of familiarity with Triplinx. In terms of user groups that we've decided to break this into, its going to be 3 groups. First time users that will access Triplinx through the survey, or on their own accord, and users that have previously used Triplinx, and users that have accessibility issues.

1. *First Time Users* - majority of users will fall into this group as expected. This is because the focus of the survey is on university students, and after making the initial claim that this group hasn't used Triplinx, it was confirmed that they might not have used Triplinx before.
2. *Regular Users* - these are the people that have used TripLinx more than once. So they're more accustomed to its functionalities. This is the group with hopes to get the most quality feedback from. This is also the group that might have used similar transit applications such as Google Maps. This is good for comparing two different user point of views.
3. *Accessibility Users* - these are the users that will have some sort of difficulty using Triplinx.

From each of the 3 user groups mentioned above, we have further separated them into 3 groups.

1. Users that are ages 10-22: This specific group is targeted to students that need to use transit to get to university or school.
2. Users that are 22 and older: This group is targeted to users that use transit applications to get to their workplace.
3. Tourists that visit Toronto (any age group): Users that visit Toronto for a vacation that want to use Triplinx to plan their routes to navigate through the city.

The aim is to get feedback from the students currently enrolled in C10, but due to time constraints, the survey has approximately 60 responses.

Following User Centered Design: by taking needs, wants, and limitations of end users into account for each phase of design process. Doing this by survey and getting feedback from users. The hope for the survey is to produce from the user's data a set of requirements that helps to move forward in making design choices. As mentioned in lecture, gathering user requirements is the most crucial stage in User Centered Design (UCD) because "unclear objectives and requirements" leads to the largest failure rate for a project. Not completing this stage effectively leads to anxiety and frustration, lost revenue, loss of customer confidence, and so on (Preece, Sharp, Rogers, 2016). Also, doing surveys shows what the users "want" and "need" in the final product. Different kind of requirements for different platforms. For example, the Triplinx website may need to do a certain task in Chrome, and in the mobile app. It can be helpful when measuring consistency between platforms by via surveys.

4. Artifacts for Gathering Data:

After analyzing the website and the design choice, a best way to gather user requirement is to conduct a survey among variety of users. The main artifact used to conduct the gathering user requirement is a survey provided to users through google docs. To get a rich and strong result of user requirements for this system, a practical and technical survey that is easier to pass around. This is a website that is used by large number of users, would require a easy survey that can be passed around to different users.

The survey was designed through a Google form. Google Forms are flexible to use and easier to gather responses. The survey questions were formed with the intention to cater to those audiences who haven't yet used this website. Other questions were more based on feedback from the users who have just recently started to use this website, and so they could perform the most basic tasks and give their feedback. In phase 1, a few problems were identified with Triplinx, and so most of the questions were to see if other users found similar issues. The purpose of this survey is to help gain valuable information about what the general public thinks about the website interface, and how much usability it has for performing tasks. New users of this website should be able to describe their first time experience of this website and these questions would help aid them in the right direction. Blackboard was chosen as the method of sharing the survey because students in the HCI course should be a great audience to describe the website using concepts of usability. With the results of the survey data, it is expected to use the data to analyze what needs to be further implemented into the website.

The link of the survey is: https://goo.gl/forms/6T4RQHvYv8MAm7C53

5. Summary of Results and Validation of Tasks

These are the summary and analysis of the survey data along with the validation of the tasks.

- Overall, approximately 80% of people did not give a full 5/5 for the visual aesthetics of Triplinx. This shows that the website doesn't satisfied the standards that of the user's expectation. Most of the users voted for 2-4 (rank) because they might think that the website needs improvements.
- Around 66% of the users liked the current layout of the website. We can also conclude that the layout of the map and direction side-to-side is a better option than having all different sections with the information.
- We can, also conclude that the other 34% that didn't like the layout, found it difficult to navigate through the various tabs and found the overall design to be confusing.
- Roughly around 68% had difficulty completing the most basic task of planning a trip.
    - This shows that with the user interface, the most basic task cannot be completed in an efficient amount of time. This contradicts a few of Nielsen's five components as users cannot "accomplish basic tasks the first time they encounter the design" (Neilson, 2012). Also, this will affect the user's satisfaction because if the user cannot finish the task, they will become frustrated and this is mainly due to the website interface.
- One of the main problems, discussed in the first phase, is the idea of overcrowded elements on the page. The results were as expected because approximately 47% of the users found this website to be overcrowded and 23% said 'maybe'.
- As a part of this website, tutorials are a given feature to help the user learn more about operating the website, and it is shown that only 30% actually found these tutorials. Whereas, approximately 70% of the survey takers couldn't find the tutorial button. As described in the tasks, the tutorial button is placed on the bottom right of the website, which is an impractical area, and this is out of the user's vision as summarized in the first phase.
- It is seen that from the results most of the survey population would specifically use this website to plan routes, but this website has many other things to offer as well. Along with planning routes, there are options such as getting information about different transit services, finding schedules etc. If the layout of the website was better and designed properly then the users would have been more aware of the different options. This can be also proven when 56% of the people agreed that Triplinx is an useful website.
- The survey compared Triplinx to Google Maps, because both websites have similar interfaces and uses. 55% of the survey users prefer to use Google Maps instead.
- We can see how people would not prefer to use this website or app over a popular one Google Maps.

From the survey results, there are a lot of improvements needed to the design interface of Triplinx. The user feedback (the last question on the survey) is useful here because with the specific responses and the Neilsen's five components of usability, the problems conceptualized in the first phase can be solved.

6. Design Decisions

Based on the results from the survey, respective changes can be made to the design using high fidelity prototyping. After analysis of the survey data, most of the design problems have come based on the subpar user interface. For the next phase where high-fidelity prototypes are provided, the design options can be taken into account to make sure that the user interface makes the design simple enough so it becomes easier to use on a day-to-day basis and influence the design system to make it very similar to Google Maps.

Based on the results from the survey, there was a heavy favouritism towards Google Maps over Triplinx. The survey included a question that asked for any further improvements that can be made to the website, which included multiple solid design changes. For example, a design choice that was suggested by the survey takers was to organize the number of elements and buttons present on the screen as it seems to be very crowded and makes it confusing for first time users. Another major feedback received by the survey is to change the "map" button on the route to "view on map". The "map" button on the route, takes the direction and shows the route on the map for users to see and visualize the directions. Based on these feedbacks, two major design choices are going to be considered for the future phase (high fidelity prototype). Along with redesigning the website to remove and replace unnecessary buttons and elements to make the user interface look organized, there also has to be changes made to some names of certain elements to make it clear for the user. In conclusion, redesigning the website and making some changes to the names, are design choices to consider for future future phase for high-fidelity.

References

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