Team Rocket

CSCC10H3 Project Proposal

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Purpose

The objective of this project is to follow a user-centered approach to analyze an interactive system by using the following HCI principles and guidelines. The website, www.triplinx.ca, is a tool that is primarily used to plan trips across the GTA. It provides users with various ways to get across the city, using different public transportation services. It serves great importance to someone that is new to the city or needs to find alternative ways to get around the city. It has variety of services for the audience. Triplinx offers transit schedules and information about the fares for all the transportation. Along with the help of planning the routes, Triplinx can help find a particular stop and also, gives updates to the different services.

Description

Despite its useful purpose, Triplinx has many poor designs for the user interface. From the perspective of a new user, the contents are placed all over the main page and thus making it look congested. For example, entering the location data from origin to destination is a specific problem. The website gives a bad layout of the map and it fails to pinpoint the exact location of the route. Another problem is the lack of space when entering information because it leaves very little room for the map, which causes the user to spend more time to find a particular destination on the map. After routes are given, the website divides the screen into three different sections, thus making the interface look tightly compact due to the excessive amount of components. This website is an issue in the sense that a user who has been recently introduced to technology and the concept of trip planning will not be able to make the best use of the website's intended purpose, which is to plan trips. After analyzing TripLinx, it was clear that entering information (such as origin and destination) was difficult to find because of where the contents were placed in the tab. This would cause problems for users who are not familiar with technology. In fact, for those who with sufficient technological knowledge would need some time to locate all the elements and services, in order to use it efficiently. From the perspective of a potential customer, the website is confusing and time-consuming despite all the useful services. The website certainly shows off its usability but with its lack of poor design, the website does not rise up to the standards of the human-interactive concept.

Target Audience

The website calls upon all age groups of users, yet they specifically call upon those who are new to the city such as tourists, immigrants and international university students. A new visitor in a city will certainly prefer to use a website that will make their travelling easier and that provides some alternatives to get around. The intended target users can include those who are previously involved with using technology since Triplinx has a mobile application as well. Taking some examples, we can say an employee who has moved into a new city for a year to work in a company wants to determine how they will get to their workplace using public transportation with their travel preference, for example shortest time, less vehicle transfers, etc. The employee can be technologically advanced, in which it would not take as much time trying to figure out the website. Another example, is a senior couple who have not used a lot of technology, decided to take a vacation in a city who wants to roam and visit some parts of the city using public transportation, they would need to use this website in order to figure how to get to their desire location. The major difference between the employee and the senior couple example would be that, the senior couple would need to spend a large amount of time in order to learn the functionality of the website. Along with these two examples, a tour guide is also a major user for this website, as it would help them provide some information in their respective tours about different ways to getting to and from a tourist attraction in the city. This website will also help the tour guide decide where to and how to get to locations, if they need to use some sort of public transport as part of the tour.

Changes to the Application Features

There has been various problems that this website has presented since it is difficult for the first time users that are trying to get a route quickly. An interface such as this can be overwhelming for a user that is using this website for the first time. Some possible changes that can be applied are:

1) It is difficult for new users to follow to the next task in order to get what they need. The instructions on how to use the website can be found on the bottom right, which is hard to see from first glance (seen in the image below). One of the main key concepts in HCI is usability. Usability is concerned with making the system easy to learn and use. A usable system is defined as easy to learn and remember how to use, effective and efficient to use, safe and enjoyable to use (Sharp, Rogers, & Preece, 2016, 35). It will be difficult for new users to learn how to use the website from first point because of the several elements.

2) McCarthy and Wright propose four core threads that make up our holistic experiences, the main concept that has shown in here is the compositional thread. This is concerned with the narrative part of an experience, as it unfolds, and the way a person makes sense of it. For instance, how are the options laid out to the people who can then lead them in a coherent way to making a desired consumptions (Sharp, Rogers, & Preece, 2016, 27). In this website some issues were portrayed such as when searching for routes, the layout of the map becomes very small. Because of how the website is displayed, there are 3 sections in the screen; the initial search, the resulting route itself, and map (as seen in the image1 in the appendix). This leads to overcrowding of the elements. It'll be confusing for the users to figure out the instructions and results as the three sections all display different pieces of information. A proper solution would be to have the user input their initial and final destination, leading to the next screen displaying the resulting map of their destination including the routes (bus, walk, flight) and fares for each. It would be easier and efficient if all the information be presented in a concise manner and not display everything in one screen.

3) Findability is another important factor which refers to the degree to which a particular object is easy to discover or locate - to be navigating a website (Sharp, Rogers, & Preece, 2016, 35) . The navigation on the app is extremely poor because of excess elements (as it can be related back to the second point). Fo example, the location of the search bar (for the website itself) is located at the bottom of the page (refer to image 1), which is not convenient for a user to access. Instead of that placement of the search bar, it could be replaced by the 'Getting Around' tab at the top of the page since it is a repetition of the tabs on the side of the page. Jakob Nielsen has mentioned that "search is the user's lifeline when navigation fails" and so if the user is able to access the search bar easily, it would be efficient for the user to get the task done. (Nielsen Jakob, 2011).

4) Vague description - The search bar on the top right of the page does not specify what should be inputted/written, since it seems like to search anything you would like on the website. when testing it, it is basically asking to search for a location instead, instead of writing out "search" in the placeholder it should be atleast written as placeholder = "Search for a destination" should be atleast written as placeholder = "Search for a destination" or placeholder = "Map" (as shown in Image 2 in Appendix).

5) Having the page to translate into different languages according to the user's approximate location is very effective. In his article "Top 10 Mistakes in Web Design", Jakob Nielsen states that the "match between system and the real world **-** The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order" (Nielsen Jakob, 2011). Triplinx is now operating with English language, however Toronto is a multicultural city with majority whose first language is not English. It would be efficient and helpful if the website can be translated into different languages to accommodate the specific part of the population.

6) When the website is extremely hard to get something undone a rather solution is - User control and freedom **-** Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo" (Nielsen Jakob, 2011). Hence, a solution to this problem is implementing an undo or restart button to go back to the starting page as it will definitely help the users.

7) Browser Compatibility - The contents on this webpage are different within different browsers; safari vs chrome vs IE vs mozilla. Ideally, best UX would come from keeping the overall experience consistent through all browsers because users will be using any of the browser depending on the system. For instance, on Safari the full screen, the website works properly but when resizing the window to half its size, the map disappears. Whereas on Chrome it shows half the screen so when clicked on Menu, then settings and then scroll up and down. One of the solutions that can be used to fix this is by as Jake Dovey asserted "Meanwhile, the images have a fixed size, so the different elements of your page can end up in different proportions depending on the system rendering them. There's no straightforward answer; you can specify point sizes in pixels (px) in CSS, which will help keep text in proportion with the other graphical elements of the page" (Whitfield, Nigel, 2008). Hence, the CSS element can be a solution to sort out the map issues in different browsers.

8) Redundancy - The "getting around" dropdown at the top of the screen is redundant since there is a side dropdown already, and is it is already redundant since it leads to the same pages. As Jakob Nielsen asserted in the article "User Interface complexity increases when a single feature or hypertext link is presented in multiple ways. Users rarely understand duplicates as such, and often waste time repeating efforts or visiting the same page twice by accident" (Nielsen, 2002). The solution to do would be removing either one of the dropdown or the sidebar dropdown since it will confuse the users greatly thinking it has different information on either sidebar.

Resources

Nielson, Jakob. “Iterative Design of User Interfaces.” *Nielsen Norman Group*, Nov. 1993, pdfs.semanticscholar.org/ad4f/cfe2985274709d684d3feeede46a3d2fad2c.pdf.

Nielsen, Jakob. “Reduce Redundancy: Decrease Duplicated Design Decisions.” *Nielsen Norman Group*, 9 June 2002, www.nngroup.com/articles/reduce-redundancydecrease-duplicated-design-decisions/.

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Sharp, Helen, et al. *Interaction design: beyond human-Computer interaction*. Wiley, 2016.

Whitfield, Nigel. "Cross-Browser Compatibility." *Personal Computer World*, 2008*, Technology Collection*, http://myaccess.library.utoronto.ca/login?url=https://search-proquest-com.myaccess.library.utoronto.ca/docview/213522701?accountid=14771.

Appendix:

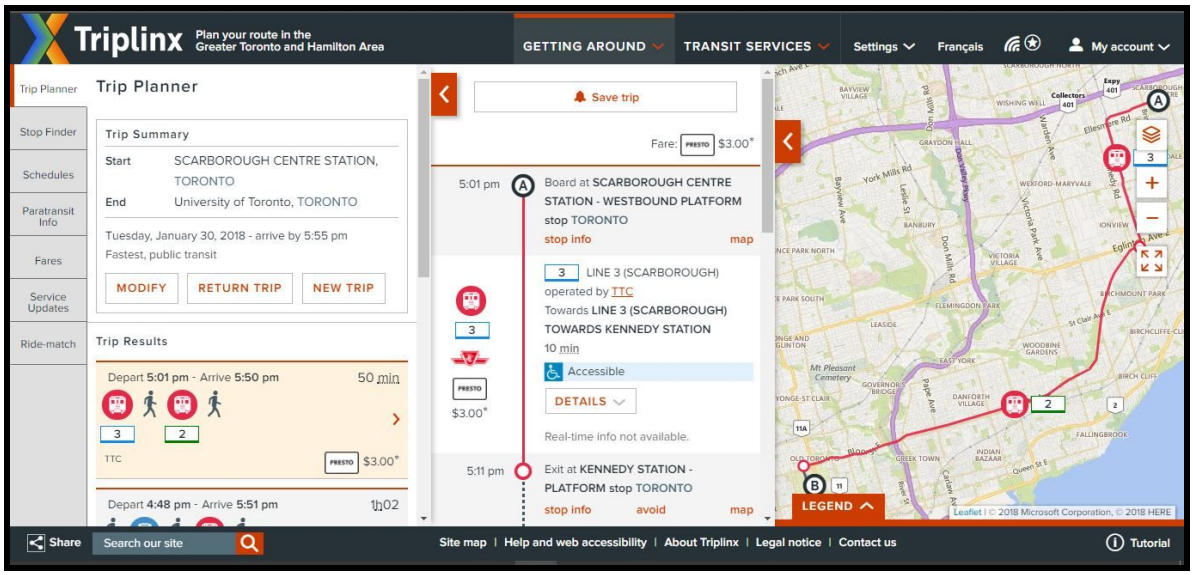

Image 1: Triplinx main website when given an origin and destination

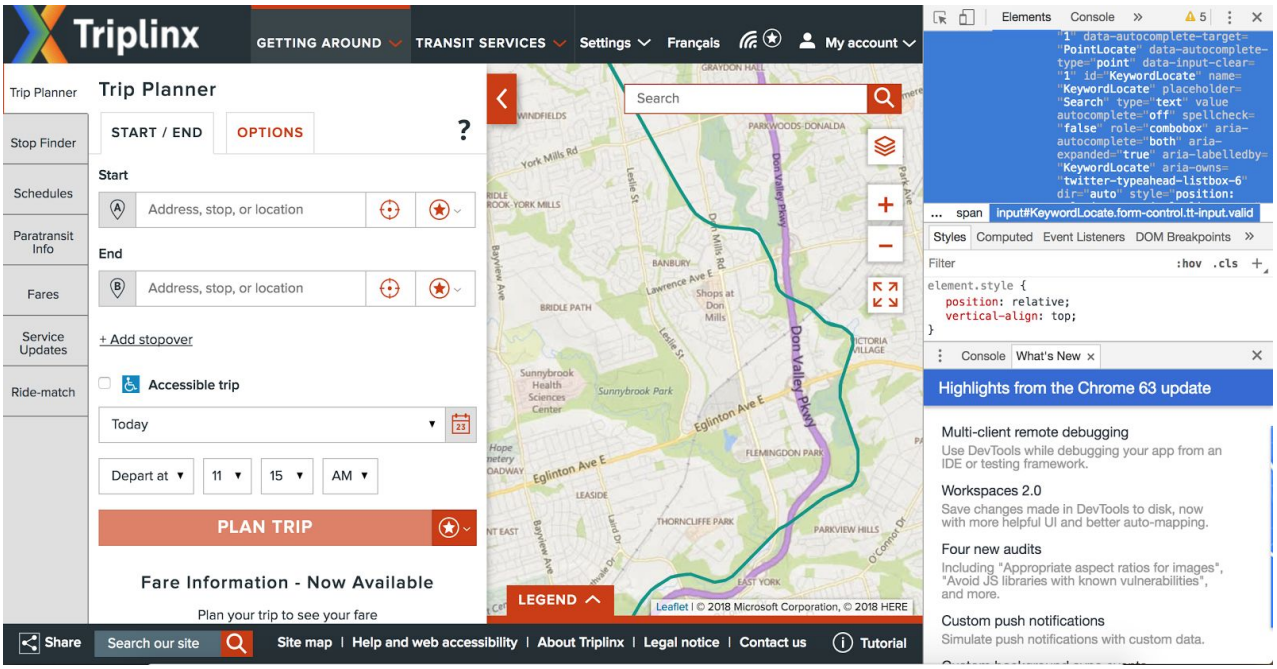

Image 2: Search bar indicated on the top right of the page