

LOCAWAY

TEAM

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PROBLEM AND SOLUTION OVERVIEW

The problem we are tackling is to provide travelers the optimal local transit suggestions based on their priorities. Our proposed solution is to place interactive boards in local public transit areas. The interactive boards suggest to travelers different routes and transportation options based on the travelers' input of current locations, destinations, and priorities. From user research, we found that the most common priorities from travelers are time, price, and safety. The interactive board will not only provide travelers a transportation option, but also display reviews from previous travelers that took the suggested transportation. The reviews are from travelers who inputted their email in the interaction board to take a voluntary survey after their trip.

DESIGN RESEARCH GOALS, STAKEHOLDERS, AND PARTICIPANTS

We did three interviews and one contextual interview to gather data and information about our potential users. In particular, people who would be arriving in a new city for the first time and solo or family travelers. We spoke to Kelly and Jack since they traveled solo and had experience traveling in countries in different areas of the world. Next we chose to interview Dylan since he had recently gone on a trip with his family and this would be a different experience from traveling solo. Bailey, our contextual inquiry participant was someone we knew who would be visiting the city for the first time. We were able to observe her as she tried to plan a route to famous landmarks in a city she had never visited before. Bailey happened to be visiting at an opportune time and so we wanted to do a contextual inquiry to understand the thought process behind the planning. For our interviews we took a directed storytelling approach with Dylan and Jack, since they had both kept maps and photos from their trip. We were able to ask more specific questions and they more easily recalled the issues they had when traveling.

Interview Participants

Kelly is our first participant who travels once a year on average. Kelly is a recent college graduate who studied Communication. She also studied Korean and Japanese in college. She is a very organized person who likes to research and plan out her trip ahead of time. She mainly travels in Asian countries and likes to revisit the same country multiple times. In her most recent trip, she went to Japan for a month on her own. She used Google Maps the most while traveling. However she also likes to go on to different government websites or travel blogs to look for local deals and traveling tips. When it comes to transportation, Kelly cares the most about saving money and time. She likes to find out all the deals and passes that are available out there when she travels.

Dylan, one of our interviewees is a senior in college studying computer science who travels with family or friends about once a year. We asked primarily about his most recent trips to Paris and London with his family and his trip to LA with friends. The trip to Europe was different than his usual trips since it was a family trip and Dylan typically plans a trip to Disneyland once a year with friends.

Jack, our final interviewee travels very often, about 4 or 5 times a year. He is a 4th year student, studying computer science, at the UW. He prefers to travel alone and enjoys going to different countries for an authentic feel of the life of the locals. His dad is a pilot, so he is able to fly standby for most of his flights, which has allowed him to travel frequently at low costs. Recently he has traveled to Chile, Columbia, Peru, Taiwan, Hong Kong, Shanghai, and Japan. Jack really enjoys meeting other travelers and locals wherever he goes, and he does not spend much time planning before his trips. He is also fluent in Spanish and has limited working proficiency in Mandarin, so he was able to converse with locals in many of the places that he travelled to.

Contextual Inquiry Participant

Bailey, our participant for the contextual inquiry has traveled at least once a year with her family and has planned two to three trips in the past. She is currently a design major at a university in Taiwan, and she likes to doodle in her free time. Recently, she came to US from Taiwan for her winter break. She prefers to do her planning ahead of time. For the contextual inquiry she planned a travel route from University of Washington to Pike Place Market, and Starbucks Reserve.

DESIGN RESEARCH RESULTS AND THEMES

Making use of forums

Jack, Kelly, and Bailey used forums as a way to learn tips and tricks for traveling from other travelers. Jack used Trip Advisor since it had good forums written by people who had traveled previously to Chile. From people's comments, Jack learned how to hitchhike in Chile, which is actually a common practice there. These forums also describe the proper etiquette for hitchhiking and the best ways to go about doing this. Kelly likes reading local blog posts and forums about local deals and famous places to go. When traveling to Japan, she found out about travel passes and local tourist busses through these forums and posts. She was also able to find some hidden places that were only famous among the locals. Bailey also made use of blogs written by other Taiwanese tourists who traveled to Seattle before. She mainly used the blogs to research where people went for food and sightseeing.

Planning on the spot is easier than planning beforehand

Our interviewees all agreed that some things were easier to plan on the spot when they were already in the country they were visiting. Google Maps was a common planning platform to see what transportation options may be available. Both Kelly and Dylan mentioned that in the countries they visited, Google Maps did not necessarily show all of the travel options that actually existed. In Paris, there were tour buses that Dylan and his family noticed. After talking to a local, they realized that this was a valid way of transportation to see the sights they wanted to see. Jack also tended to take the local buses around cities and used this as an opportunity to chat with the locals and learn more about the different forms of transportation. Kelly also had a similar experience since she knew people who knew lived in Japan and they gave her tips.

Differences between family trips and solo trips

Dylan and Jack both mentioned that trips with family tend to be very planned out, since there are more people to account for. Their parents generally liked having every detail sorted out before their arrival in a foreign country. Solo trips or trips with friends required a lot less planning. This may be more due to a generation gap, as Dylan mentioned that his mom would plan every form of transportation between cities and print out all of the confirmation tickets as well. Jack and Dylan both seemed more willing to "wing it" when it came to the trips they planned by themselves. They were both confident that they would be able to find transportation when they got to the places they wanted to go.

Unfamiliarity with local transportation ticket system

Dylan, Jack, and Bailey mentioned that they had issues with ticketing when they were in different countries. Dylan mentioned that the ticketing machines in Paris were hard to use and had very strange user interfaces. Jack had some issues with ticketing in Japan. In Japan, you buy the ticket for the number of stops you want to take. The stop where you bought the ticket is marked, and when you get off, the ticket is electronically checked to ensure that you only went that far. Jack had not realized there was an additional charge if he wanted to change lines and therefore ended up at his destination with an invalid ticket. For Bailey, she struggled to find the ticket prices and purchase method on the local bus website beforehand due to confusing wording and unfamiliarity with the language.

Preferring public transportation due to price and safety

Most of our participants preferred public transportation over cabs. In a lot of the countries that they visited, taxi drivers tend to take advantages of foreigners who are not familiar with the languages and the roads by overcharging them or taking longer routes. Jack mentioned that particularly in South America, riding public transportation is a lot safer and cheaper than riding taxi, unless you find a group of people to get a taxi together and set the price with the driver beforehand. However, there are some more downsides to public transit as well for tourists. In San Andres, Colombia, Jack found the buses extremely inconvenient because there were no publicly accessible schedules for arrival times and stop locations. In fact, the buses did not run on a set time schedule at all. Each bus was often owned and operated by one person or family. To get on the bus, you needed to wave the bus down, and instead of stopping, the bus would only slow enough for someone to jump on. For each bus you had to be aware of the route it took and know when you wanted to get off. Instead of having set bus stops, you simply had to tell the driver to “stop”. It took Jack a few times riding the bus to learn the process. Bailey made a comment in her interview that she didn't feel safe riding the taxi alone since she doesn't speak the language that well and she isn't familiar with how taxi fare works in America. Kelly preferred riding the subway and busses since it's a lot cheaper and easier.

Limited Wi-Fi and/or cellular data access

A common issue that our participants encountered was limited Wi-Fi and/or cellular data access in foreign countries. Depending on the country, Wi-Fi access can sometimes be sparse or only located at popular locations (i.e. airports, hotels, etc.), and cellular data plans sometimes don't cover many foreign countries. Jack mentioned during his interview that during most of his travels, he only had Wi-Fi access when he was he was at his hostel. To compensate for this, he often asked other travellers for tips at his hostel before he left and he would seek help from locals as he went from place to place. Dylan also described his experience of being in Europe without cellular data access. In particular, he was only able to find Wi-Fi occasionally in cafes. Not only this, but the Wi-Fi in the cafe was often not actually strong enough to do very good web browsing. Thus he was not always able to find a good mode of transportation easily.

TASK ANALYSIS QUESTIONS

Who is going to use the design?

This design will be useful for people who like to travel to different places, specifically those who care about price, time, or safety when it comes to commuting in a foreign city. The design is mostly targeted towards younger travelers.

What tasks do they now perform?

Travelers now currently use Google Maps as a starting point to find a rough estimate for the travel time and distance between each location. They read through forums and local blogs from previous travelers to find deals or tips for their trip. After they arrive at their travel destination, they will take local maps and pamphlets to search for deals that they couldn't find online.

What tasks are desired?

Our participants have indicated a desire for local transportation suggestions based on their individual priorities when traveling to different places. They mentioned that often times lack of Wi-Fi or cellular data causes inconvenience when trying to find different route options. Also, they wish to see past traveler's experience on the transportation they used to get around the area.

How are the tasks learned?

Travelers need to know where to find information relating to transportation in a foreign place. If they can find the information, they can then plan the transportation based on their priority (ex. Price, time, safety). They typically learn which sites to use and which forums to read by trial-and-error and past experience. Word-of-mouth is also very influential. People will often ask their friends and family how they planned for a specific trip if they are planning to visit the same place.

Where are the tasks performed?

Frequent travelers can update any information or tips they have as they travel, and other travelers will be able to use this information when they visit the same countries. These tasks can be performed at home on one's computer or at the travel destination on one's mobile device.

What is the relationship between the person and data?

Travelers have two relationships with data. One type of data is the information they input, and the other type is the data other travelers have inputted. Travelers can input their experiences through pictures or words during and after their trip. Before and during the trip, travelers can also gain local insights from other travelers' input of pictures and words.

What other tools does the person have?

Experienced travelers often have their own methods of organizing their travel plans. It normally involves browsing through websites on Google. They also have access to online trip planners like Trip Advisor, Expedia, Costco traveling, or Hotels.com.

How do people communicate with each other?

People currently communicate with each other through forums and face to face chats. With our design, there would be less communication directly, although users would be able to communicate through the compiled data from various users.

How often are the tasks performed?

Tasks are performed when people are planning for a trip, or documenting their experience during or after the trip.

What are the time constraints on the tasks?

Some of the information or tips that can be relayed may have expiration dates associated with them. Transportation information can change when cities change. There may be new transportation options that are built and the information or tips that travelers give can eventually become outdated.

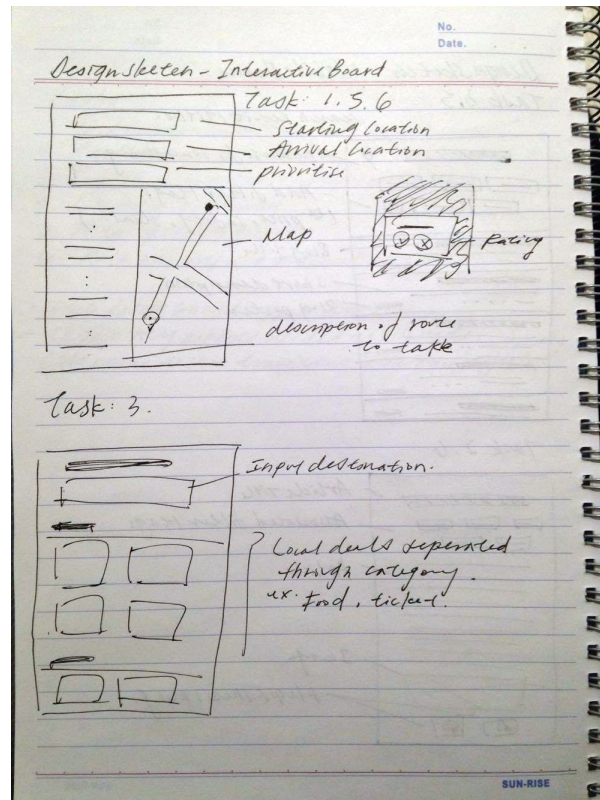
What happens when things go wrong?

When users input incorrect data or outdated information, other users will not be able to plan their trips properly. For travelers who are using the information while traveling, they might end up wasting valuable time.

PROPOSED DESIGN SKETCHES

Design #1 - Local Interactive Board

To accommodate travelers who tend to plan on the spot with limited Wi-Fi or cellular data access, a potential design solution would be to install local interactive boards. The interactive board allows people to input their starting location and target destination and filter the transportation options based on specific priorities they may have (i.e. safety, price, or time). This design also supports the tasks of looking at local deals in the area and rating/commenting on the usefulness of the information provided.

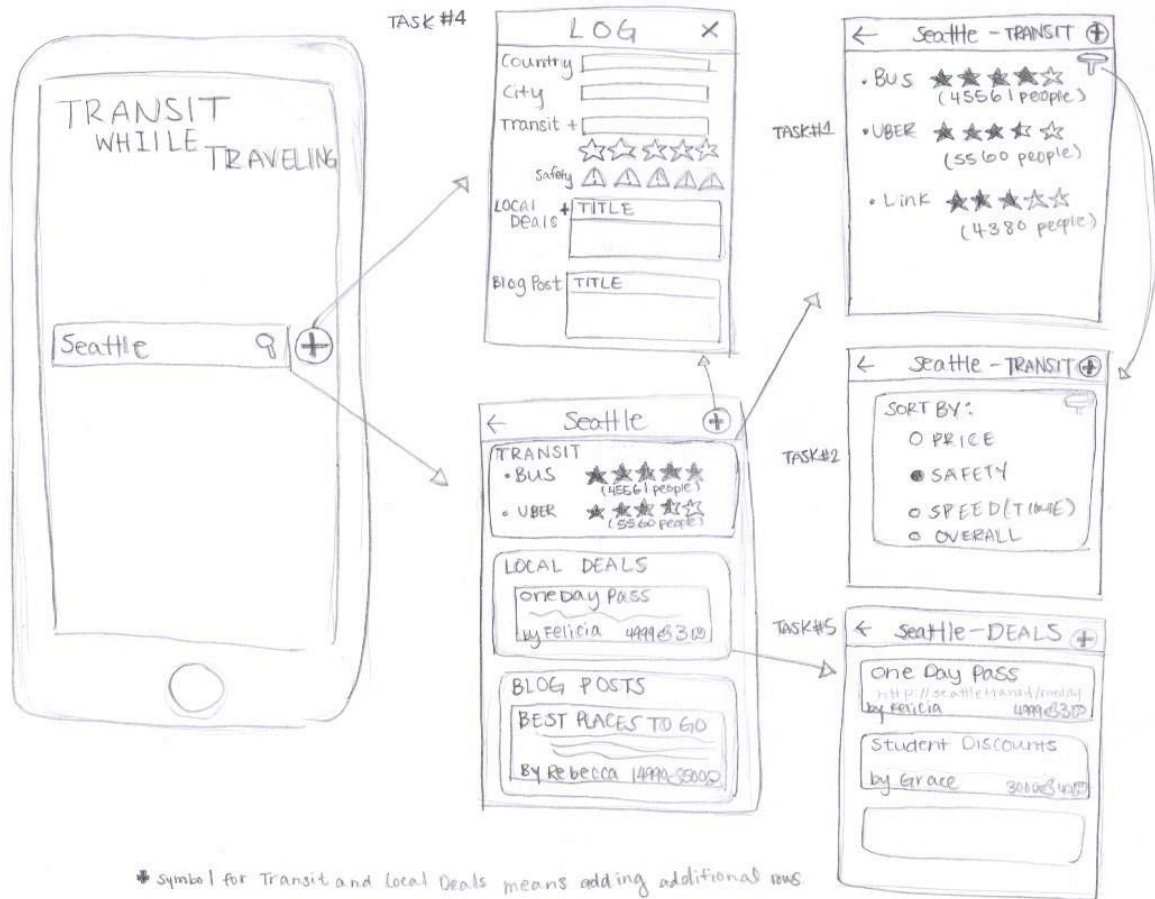


Design #2 - Mobile Application

For those who like to plan their trips on the phone, this app allows users to search for their desired cities and find out about different transportation options in these cities. When users search for a city, the app pulls up a city profile that shows three categories - Transit, Local Deals, and Blog Posts. Each category brings the user to a different page. For Transit page, users can see a list of transportation options that are available in the city, sorted by recommendation rating. Users can then decide which transportation best fits their needs. They can filter the transportation list by price, safety, time or overall recommendation.

When the users have searched for a city, the app will have an option for local deals. When this is selected, a new page will appear that shows specific deals for the city that the user searched. These will be sorted by date with the most recent deals at the top, since deals can expire.

Alternatively, users can also input data about their traveling experiences to benefit other travelers. Users can click on the plus button to provide information about their travel experiences in a city. They provide a country and city that they share about. Additionally, users can choose to share their rating on different transportations that they used during the travel and any information about local deals or general traveling tips. For the transportation rating, there's an overall recommendation rating (on a scale of 5 stars) and a safety rating (on a scale of 5 safety signs).



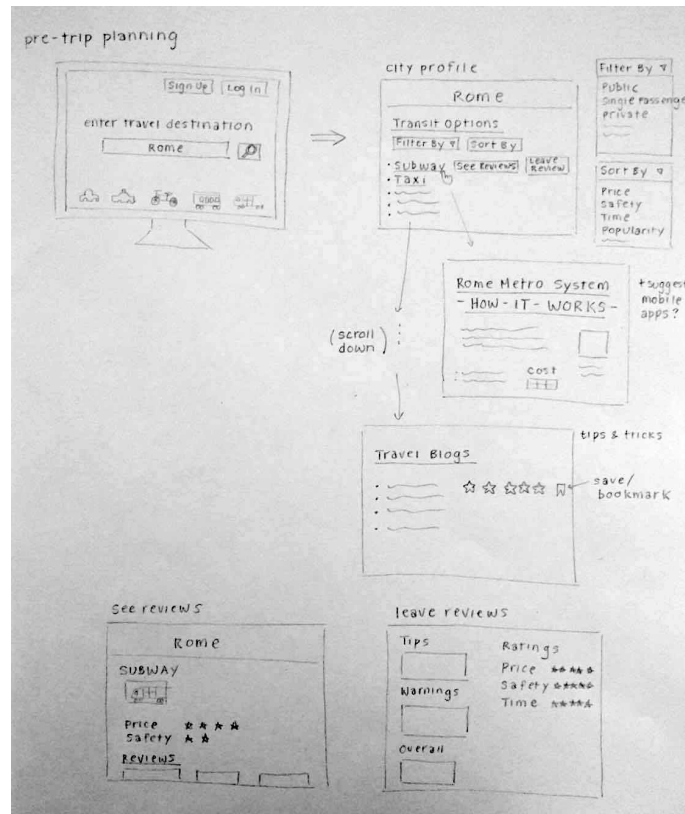
Design #3 - Web Application

Some travelers like to plan well in advance of their upcoming trips. A web-based platform would allow users to look-up transit-related information in any city before or during their travels. This design focuses on providing information about various transportation options rather than routing from one destination to another. Users can find a country/city profile for their travel destination that includes helpful information regarding transit.

After entering a travel destination in the search bar, users will be brought to a country/city profile page for the destination (upper-right sketch). This page will include links to personal travel blogs that other users have shared. There is an option to save helpful blog links to view later.

While traveling, a user can leave a review (bottom right sketch) for the particular form of transportation they used in the city they visited. Users can add useful tips for traveling or warnings

about a particular type of transportation. They can also decide to leave some overall comments. Users leave reviews with the star rating system where they can rate specifically on price, safety, and time.



Choice of Design and Tasks

After reevaluating our interviewees' feedback and other classmates' feedback, we decided to choose the interactive board as our design. Since there are a lot of mobile and web applications out there that already support many tasks we defined, we want to explore areas that are still hard to solve. Specifically, we want to focus on on-the-spot planning. Most of our participants mentioned that they prefer on-the-spot planning or had to plan on the spot even if they had planned ahead of time. We realized that Wi-Fi is a big issue for a lot of people while traveling. Instead of choosing the mobile app design, we thought an interactive board would best accommodate a lot of the problems that people might have planning on the spot. The tasks we have chosen to pursue are 1) finding and filtering transportation options from one place to another based on priority (i.e. safety, price, etc), and 2) rating transportation options based on the user's own experiences and provide feedback.

WRITTEN SCENARIOS

Scenario #1 (Storyboard #1):

Alan is a student traveling abroad for the first time. He has a friend in Japan who lives in Okinawa but his plane lands in Tokyo. He finds a nearby subway station, but he still does not know how to get from Tokyo to Okinawa. Unfortunately he did not change his phone plan before he left. He is not able to use his data unless he wants to be charged an exorbitant fee. Alan needs to find a different way of determining how to get to Okinawa. He sees an interactive board near him in the subway station. He decides to go investigate and see what it is. He selects the “Start” button on the home screen which leads him to a second screen. This screen allows Alan to choose a starting destination and ending destination. It shows him several travel options, and he is able to choose the one that he likes the best. He takes a picture of the path he needs to take with his phone so that he will have it on hand even without data. He leaves and is on his way to Okinawa!

Scenario #2 (Storyboard #2):

Tom is a college student who is traveling to Tokyo, Japan for the first time. After getting off the plane, Tom travels to the nearest subway station that he can find. He wants to first head to the hostel he booked and drop all his luggage off. Since it's his first time to Japan, he doesn't know if the subway is the best option for him to get to his hostel. Luckily, he finds an interactive board right by the subway station. After inputting his email and selecting his destination, he learns that taking a taxi is the best option for him. He quickly heads to the street and gets on a taxi. Since he doesn't speak Japanese, he had a hard time communicating with the driver. After arriving to the hostel, the taxi driver charged Tom a thousand dollars for the ride. Tom thinks that the taxi driver overcharged him and is very angry. However, since he doesn't speak the language, he can't do anything about it. Suddenly, he receives an email from the interactive board asking him to provide some feedback about his traveling experience regarding the transportation that he took. Tom decides to share the negative experience he just had riding the taxi and rates it as very expensive. A few weeks later, Amy, also a college student visiting Tokyo for the first time, is using the interactive board to see all the transportation options she could take to get to her friend's house. She notices that there is a section on the interactive board showing all the comments from people who have submitted surveys in the past. She reads them and learns some tips about traveling in Japan.

STORYBOARDS OF THE SELECTED DESIGN

Task #1



Task 2

