Usability Test Report

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Date of Test: December 6, 2013
Location of Test: New York, NY

Prepared for: Morry Galonoy
Phone Number: 212-948-1256
Email: GalonoyM@newschool.edu

Prepared by: Anthony Driscoll
Phone Number: 814-221-6318
Email: anthonydriscoll1125@gmail.com

Executive Summary

The usability of the map interface and task scenarios will be tested for Wheely. The participants will be given a task to find a specific station using the map, locate the available elevators for that station, and find directions to that elevator.

Upon review of this usability test plan, including the draft task scenarios and usability goals for Wheely, documented acceptance of the plan is expected.

Methodology

*Due to lack of cooperating weather and some cancelled appointments, two able bodied participants have been included in the study.

We tested five participants, having the following characteristics, who evaluated Wheely.

Mobility Level

(1-5 / 1 Being in a wheelchair.)

User Profile 1	1
User Profile 2	5
User Profile 3	5
User Profile 4	5
User Profile 5	4

TOTAL (participants)   5

Subway Usage

Only when visiting	1
1-10 times a wk.	1
10+ times a wk.	3

TOTAL (participants)   5

Age

18-25	2
26-39	1
40-65	2

TOTAL (participants)   5

Gender

Women	1
Men	4

TOTAL (participants)   5

Comfortableness with iOS apps

(1-5 / 5 Being completely comfortable.)

User Profile 1	2
User Profile 2	5
User Profile 3	5
User Profile 4	5
User Profile 5	3

TOTAL (participants)   5
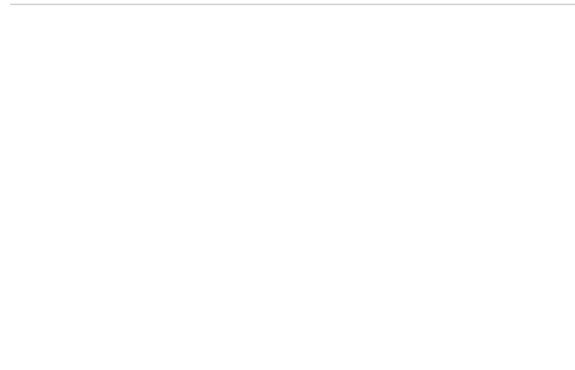
What participants did

Each participant met with the moderator for anywhere from ten minutes upwards of a half and hour. They were each given a task to complete and were asked to speak aloud. Most participants waited until after the task was completed to talk about what they experienced. The task in which each participant was asked was to find a nearby accessible station and find directions to the elevator within that given station. Scenarios were given such as "If you are in neighbor x and want to visit y, how would you find the best accessible route to accomplish z?". After the task and user test was completed, participants were asked a brief set of questions. Questions participants answered were; "How often do you use the subway system?", "How comfortable are you with mobile devices?", How comfortable are you with downloading and using apps?", "What is the level of your immobility?", "What about the app do you like/dislike?", and "What others features would be useful to you through the app?".

What data we collected
Task completion rates, verbal feedback, demographic information, time on task, satisfaction ratings, disability ratings, application error ratings, and application accessibility ratings were all collected and recorded.

Major findings and recommendations

- **"Clickability" or "Hotspots" are Too Small** – Initially it seemed like it took each user a couple tries to get "the touch" down to be able to select various buttons. This was a huge drawback in the design due to too small of "hot spots" (clickable areas). But, this drawback is primarily due to the nature of the prototype and the format is was created in. When developed out to an application this problem should resolve itself. When developing, keep in mind that the clickable areas need to be well sized and very responsive.

- "**Clickable Clues or Leading Icons**" – Three out of five participants had trouble realizing they were supposed to actually click the subway name after clicking the blue dot. The participants thought they were "done already" and didn't realize there was a whole other page of information. This could be simply solved by adding a small chevron symbol to the right of the name indicating that there is more information to be seen.

- **Navigational Backtracking Issues**– Users had a hard time getting back to the main screen (map) due to lack of a navigational button. Though this was not needed to complete any tasks assigned, users tended to wonder around a little bit while completing the task. Its recommended to implement a home button as well as a drop down navigational link to the application.

- **Map Zoom Functions** – When presented the map as a full screen of the Lower Manhattan Subway Lines, 3 out of 5 users tried to zoom out to get a full view of the map. A possible solution to this would be to set the map as a default zoomed all the way out or enable a zoom out feature.

Detailed findings and recommendations

Introductory Questions & Tasks

NOTE: List the question followed by the summaries of responses. If you ask participants to define their expectations for a set of labels, it may be useful to put them in a table so they can be compared. Following are two examples.

Introductory questions

Introductory Questions	Introductory Responses
How often do you travel the subway?	Answers included; "A lot, multiple times a week.", "Only when visiting the city.", "I don't use the subway system because it can become too challenging because I'm in a wheelchair.".
When traveling the subway system do you find it challenging to find the elevator's at any given station?	For the participants who answered yes to previous question half of the participants answered that they do in fact have problems finding elevators.
Looking at the map, what is your first impression?	All participants felt that the map looked very familiar but that "the map does not have all the stations".
Who do you think this app is designed for? Why?	Participants initially said handicap users then as an after thought agreed that it could be used for many people with different mobility restrictions.
What do you feel is the purpose of this map?	Once exploring, all participants agreed that the map is used to display accessible stations.
In the information page, what do you expect to find?	Most participants answered that they would find pictures or maps under the info page for each subway station.

Scenario – Plan your trip and find elevator locations and information.

You are currently in the upper west side at the intersection of 181st street and North Hudson visiting a friend for coffee. After grabbing coffee the two of you decide to take a trip to Lower Manhattan and visit Battery Park.

- *Please find the nearest accessible station closest to 181st.*
- *Decide which two trains you must take to reach your destination.*
- *Find directions to both 181st St. elevators.*
- *Find directions to 34th St. Penn Station elevators to transfer.*

Number of participants	5
Percent successful	100%

Scenario Findings	Recommendations
2 participants completed the task with ease (score of "2") by finding the stations' elevators on the correct train lines. 3 participants needed prompting or had significant difficulties completing the task (score of "1") 0 participants did not complete the task (score of "0").	Two participants completed the tasks with ease. On the other hand two of the participants needed help or prompting in physically selecting the stations and sometimes clicking on the station to view information pages. Some participants had to be prompted which icon was actually the "directions" link though most found this on their own by exploring all four information links until they found the directions to the elevators. The fact that it was physically difficult for participants to select the stations on the map was primarily due to the nature of the prototype. Though it is recommend to explore other means of content layout/heirarchy and iconography to display various levels informational content.

Exit Questions/User Impressions

NOTE: It may be useful to put responses in a table, especially if you want to list all participant responses rather than an overall summary. Following are two examples.

Summary of user impressions

Sample Questions	Sample Responses
What is your overall impression to the app?	Participants liked that only the accessible stations are displayed.
What is your impression of the directions capability?	Great idea but wi-fi is required and is sometimes not available in all locations of the city.
Do you feel this app is useful? Why?	Very useful, it is a lot easier than trying to use a standard MTA subway map.
What did you like best about the app?	1) Map 2) Elevator Location Maps 3) Directions
What did you like least about the app?	1) No home button 2) Directions require internet access 3) On iPad
If you were the app developer, what would be the first thing you would do to improve the app?	1) Adjust map view and zoom functions. 2) Add more detailed station elevator maps.
Is there anything that you feel is missing on this app?	1) Other accessible maps like bus lines and other train lines. 2) Accessible restaurants, restrooms, and attractions/activities
If you were to describe this app to someone else in a sentence or two, what would you say?	A useful app for someone who requires the use of elevators.
Do you have any other final comments or questions?	• Needs some attention to navigation. • Easier selecting of stations