Three mUXateers

Usability Test Report
(Face-to-Face)

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Malvi Shah

Brittany Nowicki

John Reda

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INTRODUCTION

For an interface like Google Maps, that helps people locate places in real-time, conducting an on-site usability test was quite informative. This process helped us understand what the users were thinking while navigating through the application, what their expectations were and what their interpretation was for the features provided by the interface.

In a team of three, we had one test moderator, one person responsible for recording a video of the user while he/she performed the tasks, and one person taking notes of the insights from the entire session. The activity of the user on the computer was also recorded with the help of the QuickTime Player, which could later help us analyze the users responses to different case scenarios. The session captured each participant's navigational choices, task completion rates, comments, overall satisfaction ratings, questions and feedback. The basic purpose of the project was to:

- Get data from the users about the site
- Measure user success with tasks
- Discover user difficulties and roadblocks in using the application
- Point out the positive/negative design features
- Suggest recommendations for improvement

EXECUTIVE SUMMARY

In preparation for the usability test, we created three scenarios that aimed to examine a combination of the most basic functionalities of Google Maps as well as some higher level features of the application. Throughout the testing process, we were able to uncover potential weaknesses in the interface/experience design. It also became apparent that users who interact with Google Maps regularly on a mobile device do not necessarily know how to navigate the web interface instinctively.

At the conclusion of our testing, which was conducted on two test participants, we were left with varied results. While the first participant struggled to complete any of our scenarios, the second participant was far more willing to explore the application and click around even in cases where they were unsure of the outcome of a click. For this reason, the successful completion of the three tasks by the second participant stands to shed more light on the usability of Google Maps because of the fact that they were far more interactive throughout the duration of their session.

There were several environmental factors that could have played a role in the outcome of the tests. In one instance, loud music was filtering into the testing room from a different room

nearby. Meanwhile, during the other test, there was a group of spectators observing the test, potentially adding to the feeling of pressure on the test participant. While this situation seemed to have a more noticeable impact on the behaviour of our test participant, the music mentioned during the other test did not appear to have any noteworthy impact on the participant.

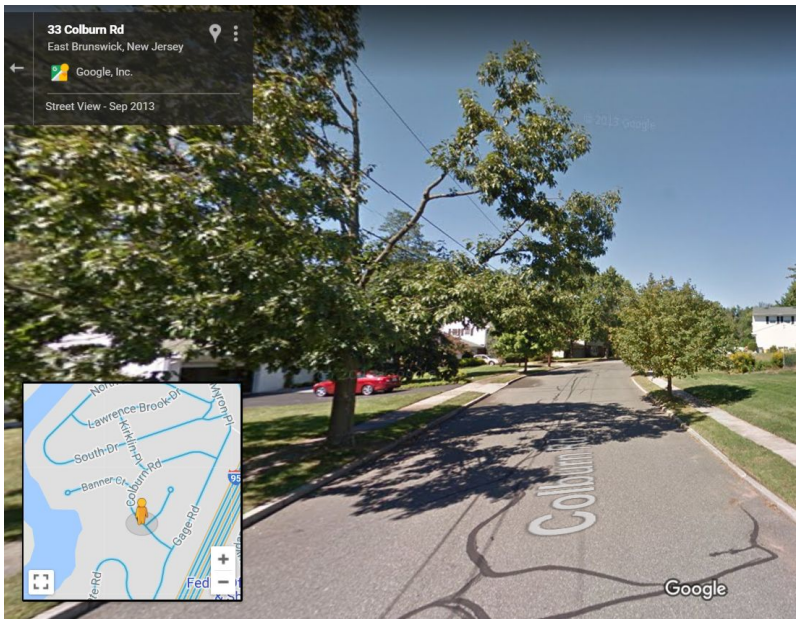
While there were drastic differences between the two tests, we were able to gain insight into several potential pain-points in the Google Maps interface. Though the severity of these issues is nominal, there are several changes that could be implemented that would enhance what is already a user-friendly and intuitive interface.

INTERFACE DESCRIPTION

The interface that we had taken into consideration to perform our analysis was **Google Maps**. Google Maps is a web mapping service developed by Google and launched in 2005. It's functionality includes provision of street maps, satellite imagery, and 360° panoramic views of streets (Street View). It assists the users to get a sense of the real-time traffic conditions, and enables them to perform the task of route planning for traveling by foot, car, bicycle, or any form of public transportation. Google Maps is available as a desktop application as well as a mobile app for the Android and iOS mobile operating systems, however we conducted our tests on the desktop version of Google Maps.

PROBLEMS

Through our user testing sessions, we gained valuable insight on the pain points that users found when simulating through multiple scenarios. Below is a list of our observations from our two test participants. A notable thing to consider when evaluating our results is that one out of our two testers was not familiar with Google Maps web application.



- Severity Rating 1: Tester 2 was trying to view directions in street view - which is not available
    - Although street view directions are not necessary to complete the task of search for directions, it was specifically noted that it would a very useful feature

- Severity Rating 1: Tester 1 specifically noted *"make it more simple"* implying the interface was complicated to understand
    - Since this note was vague we noted this severity a level 1 due to this specific users skill level and familiarity with the product. Though we do agree that, statistically, if we had more participants, we would also have more users who found the design "complicated". This conclusion can be attributed to multiple demographic factors that would contribute to this find. Our tester specifically, had a language barrier with the moderator and we believe that this, along with frustration cause our participant to feel embarrassed and confused.
- Severity Rating 1: Tester 1 was unable to successfully complete any of the three scenarios; interface was unfamiliar and needed assistance to understand how to start tasks
    - This problem was given a severity rating of 1 because although tester 1 did not understand the interface or have any idea how to get started, we believe that this participant would be an outlier when compared to addition data. Adding a "Help" questions mark icon to the main interface could possibly help alleviate a troubled user.
- Severity Rating 2: Tester 1 and 2 were unclear how to add location for their route as well as how to rearrange the order of the locations in their route
    - Given that both of our testers (with varying degrees of knowledge of the application) had difficulty with this task, we advise a severity rating of 2 because a more clearly labeled action icon would enable them complete the task. Tester 2 did end up figuring it out eventually but it took him some time to locate the buttons.
- Severity Rating 2: Both Tester 1 and 2 noticed the lack of labeling
    - Severity Rating of 2 was chosen because it's an important update that will help prevent user confusion and would benefit everyone with easier navigation of the site.
- Severity Rating 2: Tester 1 and 2 noted that the mobile version is much easier to use. It offered easier access to feature as well as more information when search additional locations to add to the existing route.
    - We believe a severity rating of 2 is appropriate for this discrepancy because Google Maps could possibly find a lack in user retention due to this issue. Users feeling frustrated with the inability to perform certain tasks that are usually easy would cause people to leave the application and search for an alternative that they do not find difficult

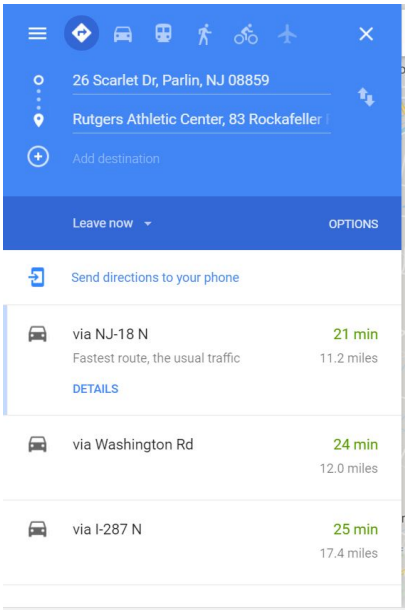
POSITIVE DESIGN FEATURES

Google Maps has numerous positive features. The main premise of the application - to provide users with directions from Point A to Point B, was described as the most positive feature.

<u>Usefulness Rating Scale</u>

- Very
- Moderately
- Not

- Usefulness Rating: Very - Ability to provide desired directions
    - Most users main purpose for accessing Google Maps is to find directions from one place to another. We have noticed that most people using the web interface are looking for directions prior to the trip and the application is sufficient is supplying them with desired results.
- Usefulness Rating: Moderately - Ability to see live traffic
    - Depending on user's trip and time of travel, live travel helps users decipher the best times to leave or best route to take. Live traffic can also be enabled or disable depending on user preference which lends to a positive customization feature.



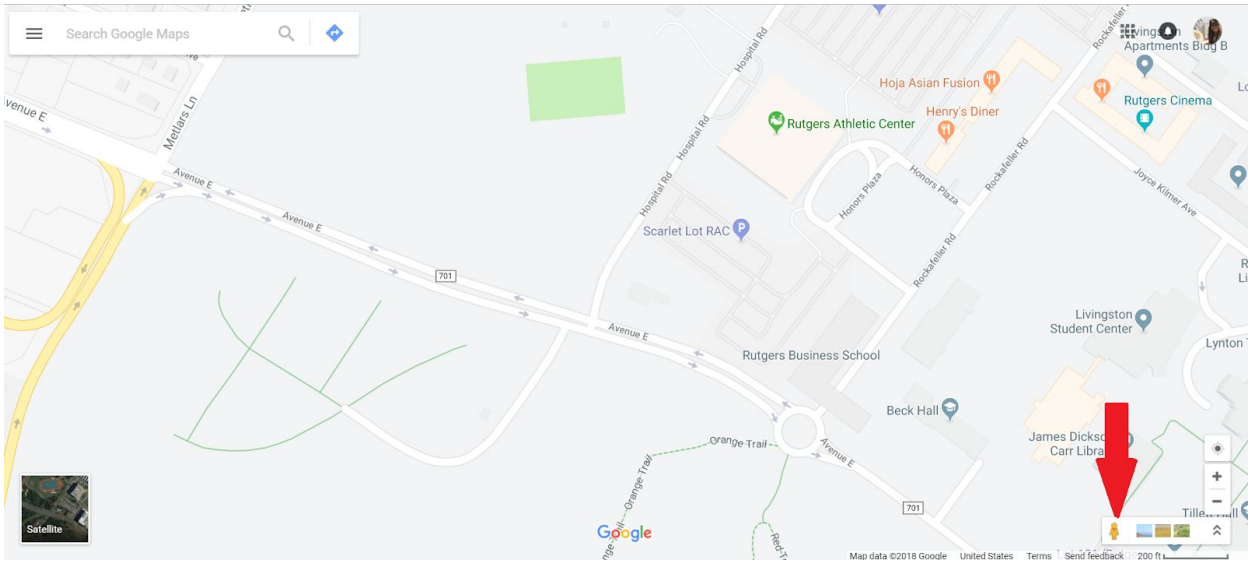
- Usefulness Rating: Very - Ability to see multiple routes
    - This is very important positive feature that also lends to the positive live traffic function. When searching for routes to your desired destination, Google Maps provides an average of 3 possible routes and the duration each route will take to reach the destination. Depending on users knowledge of the roadways, this function could really help users determine the best solution for their needs.
- Usefulness Rating: Moderately - Ability to switch between modes of transportation easily (ie. driving to walking)
    - This was positive feature we explored during our user testing. In real life situations on a college campus, students would switch from driving their car between campus, parking, and then walking around to multiple locations. This feature enabled our participants to find the fastest walking routes from destination to another.
- Usefulness Rating: Very - Ability to see destinations in street view
    - Street was useful too when look up specific businesses or buildings. This provides the user with an accurate depiction of the place they are going and

makes people feel more confident on their journey that they know where they are going. We asked our users to find a parking lot that is for Faculty/Staff near Rutgers Student Center and street view was helpful in confirming the locations selectioned.

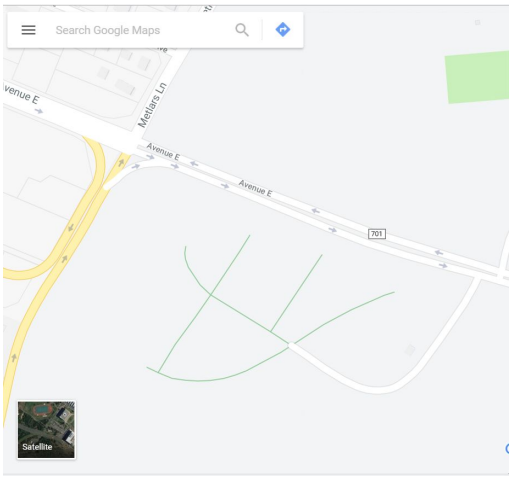
RECOMMENDATIONS

Through our user testing process, we came across a number of Google Maps features that were not very easily decipherable while there were a lot of features which were pretty straightforward to understand.

The fact that more than one of our scenarios required the user to use the street view mode in Google Maps led us to the realization that the feature of Street View is quite unclear in Google Maps. Both our users had a difficult time getting that feature to work and so we believe that labeling the icon that helps get the Street View mode or giving some sort of an indication there would make it easier to recognize.



Another issue that we came across was that when the current location and destination was already put in, and the users were asked to add stops on the way as a part of a scenario, they had a difficult time filtering out the list of options and selecting the stop they wanted based on their requirements. The interface ended up choosing a stop which was not always suitable, and did not even give the user a chance to look at all the options. We noticed Tester 2 get slightly annoyed by this and so we felt like that was a feature which definitely needed to change. Tester 1 also said, *"I would expect the interface to show me the options on the highlighted route and then let me select the one I would prefer."*



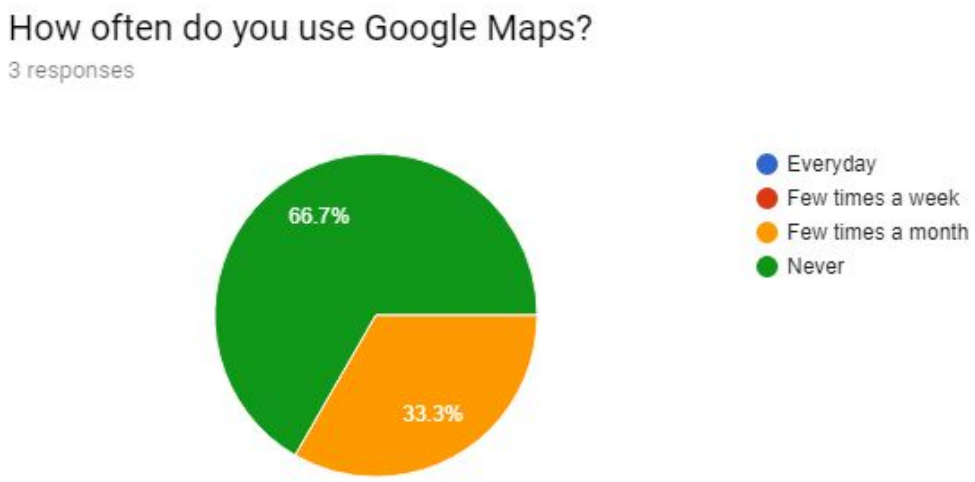
Just one interactive window on the screen enabled the users to focus on the area they were supposed to interact with. However, this had an adverse effect too. As soon as you open Google Maps, there is only one search bar that you see. For the user test we conducted, Tester 1 couldn't understand where to start. The thought of putting in the address in the search bar did not occur to him at all. When asked how he thought he could get directions, he said, *"I would just google the directions."* He expected to see the starting address, the destination address and other such options on the screen.

The fact that most of the features that users had to interact with was on one side of the screen made it easier for the users to check the map simultaneously on the other side. Other more frequently used features like checking the traffic on a particular day and time and planning a trip in advance with the best route was something that our users could locate easily and found effortless to discern.

DIFFERENCE FROM THE HEURISTIC EVALUATION

When we conducted our face-to-face usability tests, we realized that there were a number of things that we did not think of during the heuristic evaluation. The very first distinct feature was the assumption we made for the mobile and desktop versions of the interface to be quite similar. The test we conducted with Tester 1 helped us realize how differently users who use the mobile application see the desktop version. It was quite difficult for Tester 1, who had never used the desktop application, to understand the interface from the very beginning.

We had a survey in the beginning of our test to obtain some basic information about the users and as indicated in the graph below, we had users who did not user the interface that often.



There were certain issues uncovered from the usability testing that did intersect with our heuristic evaluation analysis. We recognized that the severity rating of some of those might have changed with the development of new user problems, but the usability issues still persisted.

The major difference that we discovered between the two methods was that in the heuristic evaluation, we based our analysis on our prior knowledge of the interface. We did not pay attention to the scenario of how someone, who had never used the interface, would react to it. Moreover, the scenarios we created were tried and tested by all of us multiple times but for a

user, who was trying it for the first time, it was bound to be a much different experience. These were the key facts that we neglected in our heuristic analysis and could only know about through the face-to-face usability tests.

CONCLUSION

Our first round of user testing has allowed us to draw a variety of conclusions and recommendations to take back to our client. Labeling concerns were a common theme among both of test participants. Adding labels to the icons would make for much less hesitation when starting test scenarios or personal actions in real life situations. Users would be able to more accurately navigate when they need help, are adding and switching locations to their routes, find street view, and exploring different areas on the map.

Testing showed that due to this lack of labeling, clarity was an issue that can easily be solved. We also received feedback that consistency between the mobile app and web client are very important to users. In terms of clarity, users were confused by the discrepancies between the interface and became frustrated when the web client didn't respond the same or physically look the same. We suggest that future iterations of the program integrate an update with consistent features. Users feel comfortable when their surrounds are familiar and when they approach the web client they are immediately thrown off.

There were were many feature that our test subjects liked and confirmed that current interfaced enabled them to effectively complete their tasks. Route estimation timing and live traffic received positive feedback and users found this important when searching routes during specific times, rush hour specifically.

We suspect that future testing with additional participants will affirm our current problem/solution recommendations.