# GO TRANSIT MOBILE

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Usability Testing Report Jenn Stack, Samantha Redmond, Harrisson Joseph, & Mike Arizza November 27, 2015

### **Pilot Session**

The Go Transit Mobile usability testing session went effectively and provided useful feedback in the areas of concern within the application. The participant was very vocal and continually expressed what she was doing, and why. The participant had never used Go Transit Mobile, which added a new perspective to the testing evaluation. The session was well organized, and the participant felt welcomed and relaxed throughout the entire testing procedure.

The participant was able to express her opinions and concerns about the task she was completing, providing feedback that highlighted key areas of improvement at the end of each session. In addition, the session was well timed with the scenarios and questionnaires. During the pilot testing sessions for the Go Transit Mobile App, a camera was set up to record the participant's actions as she completed each task scenario. Using a camera to capture the participant's actions was a successful method of collecting evidence that can then be referenced for additional study purposes.

However, the observer records feedback in which the participant provides but the camera is able to capture each action the participant does while navigating through the application. However, the observer records feedback in which the participant provides but the camera is able to capture each action the participant does while navigating through the application.

# Pilot Session (cont'd)

For future sessions there will only be one moderator. It was interesting to do a usability test with two moderators, and the results were successful. However, having only one moderator would help the session run more smoothly. When having two moderators the participant was unsure of whom to ask for specific directions, or questions, which than throws the participant off track from the task at hand.

Navigation was one of the main issues mentioned within the heuristic evaluation of the Go Transit Mobile App, and the actions that the participant took reflected those issues addressed. The design contains information that confused the participant, especially within multiple subpages such as the "Union Departure" command. In addition, the participant found the data within the application very unorganized, confirming the heuristic evaluation on consistency and standards. The session was very informative and the participant helped to evaluate the application from a new perspective. When creating the scenarios it was difficult to try to construct situations based on a user that has never used the GO transit system. Having a participant within the pilot session that has only used the Go transit system a few times helped give a different understanding of how users interact with the interface.

The participant gave many recommendations to different scenarios and voiced suggestions that she wished would be implemented within the application. In addition, when creating the scenarios and questionnaires a focus was put on the content that the application already uses. For example, the session was focused on navigation and how the application works. The pre-test questions helped to understand the participant and why specific actions were taken.

# **Collation Strategy**

Before the session began, no information about the participant was known. It was unexpected to learn that the participant had no prior experience with the Go Transit Mobile application, and very little experience with taking Go Transit, as a form of transportation.

The questionnaire responses, video documentation, and the System Usability Scale results presented similar information that allowed for a clear data analysis of areas of improvement. The video documentation was a great resource to collect additional information that was missed by the observer during the session.

In addition to the questionnaires and System Usability Scale results, the participant's behaviors and body language was analyzed and recorded by the observer. Behavioral information is important factor because it can express how the participant is feeling throughout the session. The participant often paused, and attempted to re-due tasks that were complete. This indicted that the difficulty rate of each task might be higher than the participant recorded on the post-task questionnaires.

The participant's willingness to voice her opinion and provide recommendations aided in the data collected during the testing session. Familiarity is a very important aspect when analyzing each task within the session. The participant easily executed the tasks that included a familiar flow of content.

The participant found this task particularly easy because of the familiarity with settings, and the icon that represents that particular feature. The comments from the participant throughout the session focused the functionality, and readability of the application.

# Part C Report

The following pages contain detailed summaries of how the test was conducted and the results found within the testing session.

# **Executive Summary**

The Go Transit Mobile App usability testing team consisting of four members of the Sheridan College's Interaction Design Usability Studies class. The team conducted a usability test of Ryerson University and Metrolinx Go Transit Mobile application. The testing session took place at Sheridan College, Trafalgar campus. The objective of the test was to assess the usability, functionality, and overall user experience of the Go Transit Mobile App in order to determine a better understanding of a user's needs.

On Friday November 6, 2015, a peer assistance testing session was conducted with a fellow classmate. The purpose of this procedure was to receive feedback of the usability test before conducting the pilot test. Some changes were made to the task-scenarios during the peer assistance testing session. Including adding and revising the scenario presented during the session. The following Friday, November 13, the pilot of the Go Transit Mobile App was conducted. One participant was used for the usability test. The testing session lasted approximately one hour. The estimated timing for each task-scenario varied due to the complexity of the scenario. Overall, the participant found the Go Transit Mobile application to be difficult to navigate due to her lack of experience with GO transportation. The participant rarely uses Go Transit, so the feedback provided aided to the issues presented within the application.

This document contains the participant's feedback, SUS ratings, and task-scenario completion comments, level of difficulty completing each task, error and recommendation. A copy of the participant's feedback within the task-scenario's and questionnaires are included within the Appendix.

# Introduction/Background

The Go Transit Mobile App serves as an information application for users who frequently use Go Transit services. Go Transit Mobile provides information pertaining to public transit across the Greater Toronto Area. Providing users access to view train and bus schedules, along with services updates.

The Go Transit Mobile App usability testing was conducted by a group of third year Interaction Design students. The testing session used a live version of the Go Transit Mobile App on an IOS device, located on one of the testers devices.

A video camera captured the participant using the application and navigation choices while exploring the app. A voice recording device recorded the participant's feedback along with questions and steps in which the user is taking. An observation logger used a laptop along with Microsoft Word recorded the participant feedback, comments, and concerns during the testing procedure. The moderators, observation logger, and technician were present in the testing room during the usability test.

The session captured the participant's navigational choices, pre and post task completions responses, comments, and overall satisfaction and feedback.

# Methodology

Professor Julie Buelow, of the Usability Studies class contacted and recruited the participant. Julie contacted the participant via-email to inform her of the purpose of the testing and requested her availability to participate in the Go Transit Mobile usability test. The participant agreed to participant in the testing and a set time and date was scheduled.

# Type of Test:

The Go Transit Mobile usability testing session was conducted as a moderated in-person testing session. The participant was tested while the moderators, observation logger, and technician were present in the room.

### **Testing Conditions:**

The Go Transit Mobile App usability testing session took place in a classroom within Sheridan College, Trafalgar campus.

During the testing session the participant used an IOS device that contained the Go Transit Mobile App. While the participant conducted each task scenario, the IOS device was located on a projection monitor that allowed the testers to view the participant completing each task.

The participant was also video and audio recorded for observation purposes. A video camera was located at the back of the testing room and was angled to capture the projection screen.

The participant's responses and observations while navigating through the Go Transit Mobile App was recorded on a voice recorder within an IOS device. After the testing session was completed, the audio and video recordings were then saved onto one of the moderator's laptops.

# Participant

The Go Transit Mobile usability testing session contained one participant. The participant was recruited from Sheridan College. The participant had no prior experience with the Go Transit Mobile App.

#### Format of Session:

The Go Transit Mobile App usability testing session was conducted within approximately one hour. Within the testing session the following procedures took place:

- Introduction and Briefing (5 minutes)
- Interview and Pre-task questionnaires (10mins)
- Task scenarios and Post-task questionnaires (30mins)
- Debriefing (15mins)

#### Session:

Prior to the testing session, the two moderators welcomed the participant and explained the testing session and gave a brief reasoning as to why the Go Transit Mobile App was being tested. The participant was then asked to fill out a number of confidentiality forms, which allowed the testers to conduct the usability testing session. The participant filled out a brief background questionnaire before proceeding onto the task scenarios. (Please see Appendix A for the completed Pre-Test Questionnaires.)

Before beginning each task scenario, the participant read the scenario and explained the task she was completing. While completing each task the participant informed the testers of the actions and procedures she was taking during each task.

# Session (cont'd)

After each task was complete, the moderator asked the participant to fill out a short questionnaire that rated the ease and difficulty of each task:

- Rate the ease/difficultly of performing the task
- Rate the likelihood of using the features performed
- •The participant was then asked to explain her ratings
- (Please see Figure 2 for the Post-Task Questionnaires)

After the final task scenario was completed, the moderators asked the participant to fill out a number of questionnaires pertaining to the overall experience of using the Go Transit Mobile App. The questionnaires contained a scale of 1 – 5 ratings that included:

- Rate the ease/difficultly of performing the task
- Rate the likelihood of using the feature performed
- The participant was then asked to explain her ratings
- Ease of navigating the Go Transit Mobile App

- Information facilitation level of difficulty locating specific requirements within the tasks
- Overall satisfaction of the Go Transit Mobile App

The moderators also asked the participant the following explanatory questions that included:

- Application content most important aspect of the app
- Recommendations to other users
- Improvement factors
- Application organization aspects that were frustrating
- Benefits of the Go Transit Mobile testing session

(Please see Appendix B for the Post-Test Questionnaires)

# **Tasks/Scenarios**

The participant completed a total of nine tasks that challenged her knowledge and experience of the Go Transit Mobile App. (Please see Appendix C for the list of tasks presented to the participant)

### **Test Goals**

The Go Transit Mobile usability testing session goal was to provided feedback and recommendations addressing the use of the application. The testing sessions allowed for the collection of data that related to how the participant used the application along with whether she faced any struggles while navigating through the application.

# **Findings/Results**

### **Pre-Test Questionnaire Results:**

The pre-test questionnaire helped to evaluate the participant, and her knowledge of the application before entering the usability session. As shown in *figure 1*, the questionnaire gives an overview of the routes, and the interfaces that the participant is familiar with, which helps to understand specific actions throughout the session. (Please see Appendix A for the completed Pre-Test Questionnaires.)

# Figure 1: Pre-Test Questionnaire Results

Question	Answer
As someone who uses public transportation, what information do you look for first?	- A map to find the desired route - Prices - Shortest travel time
What are your three main reasons for using go transit?	- Quicker and easier than driving (depending on the route) - For longer trips - More direct route
Where would you be traveling most by Go Tran- sit?	Downtown Toronto
Have you ever used the Go Transit Mobile app?	No
(If known) List the routes you take most often with Go Transit?	- Oakville to York University - Mississauga to Downtown Toronto
How often do you use Go Transit Services?	Not often
What websites or apps have you used for public transportation services?	- Go Transit - Mississauga Transit - Oakville Transit for schedules

# Post-Task Questionnaire Results

During each task the observer took notes on the participant's actions and responses to the scenarios. The tasks were ordered from easiest to the most difficult task. The difficulty rate within the table displays the rating, which the participant assigned to each task. As shown in *figure 2*, the difficulty rate for each task varies, and an explanation is displayed for a quick overview of the key findings of each task. . (Please see Appendix C for the list of tasks presented to the participant)

# Figure 2: Post-Task Questionnaire

Task	Key Finding	Difficulty (1 Very Easy – 5 Very Diffi- cult
<b>1.</b> Plan bus route	<ul> <li>Participant was confused and did not know how to proceed with the information</li> <li>Scrolled through the list multiple times</li> <li>Went back and forth through different subpages, was unsure of what information to look at</li> </ul>	4
2. Voice alerts	-Went to quick tips for help, but the participant did not find what she was looking for -Confused whether the participant completed the task correct- ly, or if the function itself was not working -Did not know what the point of creating a voice alert was, wanted to see how it worked	3
3. Set alert	-Going to the Union departure subpage was easier than choos- ing train schedules individually -Tried multiple options before completing the task -Unsure if the task was completed correctly	3
4. Add/delete alert	-Clear when an alert was added and deleted -Participant was satisfied and confident that the task was com- pleted properly	1
5. Adding favourite	-Participant completed similar tasks previous, which made the task easier -Needed more clarification about the task -Connected the star icon and remembered seeing it on the main page	2

# Figure 2: Post-Task Questionnaire (cont'd)

Task	Key Finding	Difficulty (1 Very Easy – 5 Very Diffi- cult
<b>6.</b> Switching destina- tion and departure	-Confused, scrolls through the information multiple times and does not come to a decision -Does not know what corridors are and how to use that section of the application -Eventually notices the button and then the task is clarified	5
7. Plan train route	-Does not know which line connected with each route -If participant was provided the information about which route and corridor to select, the task would have been easier	3
8. Finding service updates	-Did not know if she should find the specific route and then get further information about that route, or to so to the service update subpage -Would be easier if the list of stations were listed with the con- struction and service updates	4
<b>9.</b> Plan future route	-Very confused -Application froze and participant got confused and did not know how to proceed	5

# **Task Completion Results**

*Figure 3* Displays a summary of the participant's completion of each task. While the participant attempted the tasks presented, the time it took her to complete the tasks correlates with how many errors she made during each task. The participant was constantly unsure as to whether or not the task was properly executed.

### **Participant Comments:**

• "It would be easier if you could click each line and corridor for more information and an explanation"

• "Would be an effective application if the user knew the routes and lines to take."

• "I would definitely use the application if it worked."

### Participant Suggestions:

- Confirmation windows when a task is completed to be sure it was finished correctly
- Indication of where she is within the application at all times
- Clarification of routes, corridors, and lines
- Areas to search through the information, instead of having to continually scroll

Task	Task Completion	Errors	Time on Task (minutes)
1	No	-Went to train Schedules instead of bus schedules	4:00
2	Yes	-Chose quick tips instead of the settings	2:55
3	Yes	-Tried to select a filter, which froze the application	3:24
4	Yes	-No errors made	0:47
5	Yes	-No errors	1:44
6	No	-Switches the departure and the destination manually, not using the button	4:50
7	Yes	-Route did not refresh from pre- vious task, and participant didn't notice and continued the task with the wrong information	3:36
8	Yes	-Goes to Union departures instead of service updates	3:52
9	No	-Selects the date picker and freezes the application	4:24

Figure 3: Summary of Completion, Errors, and Time on each Task

# **Post-Test Questionnaire Results**

The post-test questionnaire allows the participant to measure the overall satisfaction of the application. The answers within *figure 4*, show that the participant was not pleased with the application, and found it very difficult to navigate and complete many of the tasks during the session. (Please see Appendix B for the completed Post-Test Questionnaires)

# Figure 4: Post-Test Questionnaires

Question	Answer
Please rate the ease/difficulty of your experience while navigating through the app. (1 being very easy 5 being very difficult)	3, it depends on how familiar you are with transit, it makes it much easier if you are
Please rate your difficulty while trying to locate a specific train/ bus route. (1 being not difficult and 5 being very difficult)	5 very difficult. Hard to find some routes based on the corridor if you don't know them. There should be a list somewhere.
Please rate your overall satisfaction with the Go Transit Mobile App. (1 being very satisfied and 5 being unsatisfied)	3, with some adjustments, it is a very useful app.
What do you think is the most important aspect of the Go Transit Mobile App?	Schedule finder so you know which route to take and what times are available.
If a friend asked you to recommend the best way to find train/ bus routes, and departure times, would you recommend this app?	Yes
If Go Transit Mobile were to be improved, would you be willing to pay for the app?	No
If you circled No to question 7, please explain why.	Transit info should be free as you already pay to use it
What do you think is the most frustrating aspect of the Go Transit Mobile app?	Corridor – of you don't know the train corridors you spend a lot of time searching for the one you want.
Did you find this testing session to be beneficial to your experience with the GO Transit Mobile App? Explain.	Yes, it is great to see what it is like before hand so you can make suggestions for improvement, if needed.

# Figure 5: Participants Recommendations

Change	Justification
Add a calendar to see what times bus and trains are running on specific days.	To plan a trip ahead of time there must be an option to select a future date and view the train and bus schedules for the specified day.
Add a search option to both train and bus sched- ule subpages.	The search will help narrow down schedules and route options, and make it easier for the user to find what they are looking for.
Additional option to get more information about specific bus and train routes.	Clarification on corridors, and bus and train routes to get a better understanding of which route is the correct to take.
Persistent navigation bar	A persistent navigation bar is used to let the user know where they are at all times within the ap- plication, as well as getting to different subpages without having to go back to the main page every time.
Updated service updates and construction post- ings for each station	Users will be able to see if there are any prob- lems or obstacles at the various trains and bus stations, as well as get updated information on route delays.

# **Metrics**

### System Usability Scale Ratings:

The participant also completed a System Usability Scale (SUS) that provided reliable results of the overall experience of using the Go Transit Mobile App. The SUS allowed the testers to collect effective feedback pertaining to the strong and weak features of the application. The rating questions included:

- Frequency of using the application
- Difficultly following through with tasks presented
- Ease of application
- Guidance in navigating the application

(Please see Appendix D for the completed SUS)

# Conclusion

In conclusion, the Go Transit application has multiple issues that were presented and confirmed with the pilot usability session. The questionnaires helped to measure the participant's satisfaction with the application, and give additional feedback for research purposes. The pilot usability test confirmed the original heuristic evaluations of the application and provided recommendations for conducting additional usability tests. The participant provided vocal and effective feedback, however, failed to report on specific actions that were being taken during each task. When analyzing the observer's notes, it is obvious there was a pattern of task failure as the test session continued, as the harder tasks were placed at the end of the test. Overall, the session was very organized, and provided useful information to improve the Go Transit application.

# Part D Wireframes

The following pages contain user-experience design improvements of the GO Transit Mobile site architecture.

# **UX Design Improvements**

Based off the results of the Go Transit Mobile usability test, the identification of how to improve the user experience of the GO Transit mobile app was collected. The following key changes in UX design would optimize the app's performance and conversion rate. These changes would also ensure the quality of user engagement and reduce roadblocks while using the application.

### 1. Feedback

During a number of task-based scenarios, the participant mentioned that she was never sure if a task was completed accordingly. A pop-up window or a confirmation screen indicating to the user that the action they've just completed has been acknowledged and register, would exponentially improve the user's journey.

### 2. Improved Navigation

The participant frequently encountered roadblocks when trying to navigate the app. There were times when she tried to press a selection that she believed to be clickable when it was not. The app also needs a persistent navigation bar. When the participant searched for arrival and departure times, she couldn't determine which time block was which because the navigation bar disappeared once she scrolled down.

# UX Design Improvements (cont'd)

### 3. Readability

The participant noted that the content generated on the screen was overwhelming and made it difficult to read and determine content hierarchy. The app needs to organize visual content in a way that is easy to understand and remove clutter.

### 4. Clarification of Train Routes

Train route lines are called corridors, which caused a lot of confusion. The participant did not understand why they weren't simply called lines. The fact that she could only search a train station by corridor name was problematic because she was not an avid GO Transit user. The app should allow users to search stations by name.

### 5. Improved Performance

One of the major points of contention with the app is that it frequently crashes when an attempt is made to set a filter or a schedule. Many people rely on the GO Transit app for accurate and reliable transit service information. The fact that it crashes so frequently is unacceptable.

**1. Feedback:** Confirmation page requesting customer to confirm selection.



**2. Improved Navigation:** Improved navigation will quickly take customers back to wherever they left off on the page.



# Part D: Wireframes

Go Transit Mobile - Usability Testing Report

**3. Readability:** Improve clarity of information with better organization of content.



**4. Clarification of Train Routes:** Customers will have the ability to search for their train station schedules by name instead of searching by corridor.



**5. Improved Performance:** An alert pop-up will indicate to users that an error has occurred when a system issue arises.



# Appendices

The following pages contain the appendices of the completed:

- Pre-Test Questionnaires
- Post-Test Questionnaires
- Tasks presented to the participant
- Systems Usability Scale (SUS)

# **Pre-Test Questionnaires**

Question 1: Who uses public transportation what information do you look for first?

**Answer:** Look for the map to find the root I need to take and look for prices shortest travel time.

Question 2: What are your three main reasons for using Go

Transit?

- Answer: An easier way then driving and finding parking
  - Depending on trip, may be easier to take transit
  - More direct route

Question 3: Where would you be traveling most by Go Transit? Answer: Downtown Toronto

Question 4: Have you ever used the Go Transit Mobile app?

Answer: No

### Question 5: (If known) List the routes you take most often with

Go Transit?

Answer: • Oakville to York University

• Mississauga to Downtown Toronto

Question 6: How often do you use Go Transit Services? Answer: Not often

Question 7: What websites or apps have you used for public transportation services? Answer: Go Transit, schedules services on the website, and Missis-

sauga Transit websites and Oakville schedule services

# **Post-Test Questionnaires**

Question 1: Please rate the ease/difficulty of your experiencewhile navigating through the app. (1 being very easy 5 being verydifficult)Rating: 3Answer: It depends on how familiar you are with transit; it makes itmuch easier if you areQuestion 2: Please rate your difficulty while trying to locate aspecific train/ bus route. (1 being not difficult and 5 being verydifficult)Rating: 5

**Answer:** Hard to find some routes based on the corridor if you don't know them. There should be a list somewhere

Question 3: Please rate your overall satisfaction with the GoTransit Mobile App. (1 being very satisfied and 5 being unsatisfied)fied)Rating: 3Answer: With some adjustments, it is a very useful appQuestion 4: What do you think is the most important aspect ofthe Go Transit Mobile App?Answer: Schedule finder so you know which route to take andwhat times are available

Question 5: If a friend asked you to recommend the best way to find train/ bus routes, and departure times, would you recommend this app?

Answer: Yes

# Appendix B – Completed Post-Test Questionnaires

Go Transit Mobile - Usability Testing Report

# Post-Test Questionnaires (cont'd)

Question 6: If Go Transit Mobile were to be improved, would you be willing to pay for the app? Answer: No

Question 7: If you circled No to question 7, please explain why. Answer: Transit info should be free because you already pay to use it

Question 8: What do you think is the most frustrating aspect of the Go Transit Mobile app? Answer: Corridor – of you don't know the train corridors you spend a lot of time searching for the one you want Question 9: Did you find this testing session to be beneficial to your experience with the GO Transit Mobile App? Explain. Answer: Yes, it is great to see what it is like before hand so you can make suggestions for improvement, if needed

# **Tasks/Scenarios**

### Task 1:

You have an interview at Square One Terminal and you need to take the GO bus to get there. You are leaving from Sheridan College, Trafalgar Campus. Find the route from the college that will get you to Square One GO Terminal.

# Task 2:

You have a disability that requires the use of the voice commands and you want the application to set up a function that will notify you with voice alerts. How would you go about setting up that function?

#### Task 3:

You are at the Eaton Center and need to make it back to Union Station in time to catch your train. Make an alert that will notify you ahead of time of the train departure.

### Task 4:

Arrival alert has let you know that your train has arrived, but you change your mind and want to take another train. Delete the current alert that is set and add a new one.

### Task 5:

Everyday you take the same train route from Union Station to Oakville GO. Instead of having to search that specific route each day, bookmark the desired route and locate it for the next time you travel.

### Task 6:

You are traveling from Sheridan College, Trafalgar campus to Appleby GO Station. You realized that you selected your end destination as your departure. Switch your destination and your departure.

# Tasks/Scenarios (cont'd)

### Task 7:

You are late for work and need to catch the train to Union Station. You are the Ajax GO station and you think your train may be delayed. Find out when the next train departs from Ajax GO Station to Union Station.

### Task 8:

You are traveling from Union Station to Oshawa. You automatically walk towards the platform in Union your train normally departs from. You find out that there is construction on the track the train normally departs from and your train is actually departing from a different platform. Where do you find information that notifies you that you are headed to the correct platform?

### Task 9:

You are planning a trip from Brampton GO Station in two days from now. You know that you will not be able to make it to the Brampton GO Station until after 2:00pm. Find out which times the train will run after 2:00pm, two days from now.



1. I think that I would like to use the app frequently

2. I found the app confusing

3. I thought the app was easy to use

4. I think I would need someone to show me how the app works in order for me to use it

5. I imagine people would have difficulty using the app



6. I found that the functions within the app were inconsistent

7. I felt very confident using this app

8. I needed to learn a lot of things before I could understand how the app works

9. I found the app very frustrating to use

10. I think a lot of people would use this app frequently