

## 1. Platform

- 1.1. The application shall be compatible with the iOS mobile platform.
- 1.2. The application shall be compatible with the Android mobile platform.

## 2. User Accounts

- 2.1. If it is a user's first-time opening the application, the application shall prompt the user to enter an email address, password, credit card information, and to create or link to a TAP account.
  - 2.1.1. If the account is created successfully, the application shall send a confirmation to the user's stored email address.
  - 2.1.2. If the account creation is not successful, the application shall display an error message that prompts the user to reenter their information and will not be logged in.
- 2.2. If a returning user opens the application, it shall prompt the user to enter their log-in information.
  - 2.2.1. If the log-in attempt fails, the application will display an error message that prompts the user to reenter their log-in information.
  - 2.2.2. If the log-in attempt succeeds, the user will be shown a transit management screen.
- 2.3. The user shall be able to allow the application to automatically sign them in.**
- 2.4. The user shall be able to sign out of their account.**

## 3. Usage

- 3.1. If the application loses connectivity, the application shall display an error message.
- 3.2. The application shall retrieve the user's location at intervals of  $120 \pm 10$  seconds.
- 3.3. The application shall allow the user to manually refresh their location.**
- 3.4. Upon updating the user's location, the application shall update estimated times of arrival for nearby Metro transportation.**
- 3.5. The user shall be able to select which bus or train lines is displayed first when the user is nearby a particular Metro station.**
- ~~**3.6. The application shall be able to display a static map with Metro routes.**~~
- 3.7. The application shall allow the user to change their email address.
- 3.8. The application shall allow the user to change their password.
- 3.9. The application shall allow the user to delete their account.

**3.10. The user shall be able to link up to 5 dependents TAP accounts to their account.**

#### **4. Payments**

4.1. The application shall allow users to purchase non-exclusive TAP passes.

4.2. If the user selects to purchase a ticket, the application shall check to see if the user has an applicable TAP pass.

4.2.1. If the user has an applicable TAP pass, the application shall generate the selected virtual ticket.

4.2.2. If the user does not have an applicable TAP pass, the application shall confirm with the user it will charge the stored credit card.

4.2.2.1. If the card does not process, an error message shall be displayed and the order shall not be accepted.

4.2.2.2. If the transaction succeeds, the application shall create a virtual ticket.

**4.3. If the user has more than one TAP unused pass, the application shall prompt the user to select which to use first.**

4.4. The user shall be able to select up to 2 dependents' accounts to be attached to a virtual ticket.

4.4.1. If the dependent is over 5 years old, the application shall calculate the additional ticket fare.

**4.5. If the user selects to use their ticket, the application shall signal the gate up to a maximum of 3 attempts at 10 ± 5 second intervals to accept.**

~~4.5.1. If the application is unsuccessful on the 3rd attempt, the application shall attempt to use bluetooth to signal the gate (see 4.5). If the application is unsuccessful on the 3rd attempt, the application shall display an error message.~~

4.5.2. Otherwise, the gate is unlocked, permitting the user to pass through.

~~4.6. If the application does not have connectivity when the user attempts to use a ticket, the application shall attempt to use bluetooth to use the ticket up to a maximum of 3 attempts at 20 ± 5 second intervals.~~

~~4.6.1. If the application is unsuccessful on the 3rd attempt, an error message shall be displayed.~~

~~4.6.2. Otherwise, the gate is unlocked, permitting the user to pass through.~~

- 4.7. The application shall store unused virtual tickets for at least 1 year.
- 4.8. The application shall store used virtual tickets for at least 30 days.
- 4.9. The application shall allow the user to change their credit card information.
- 4.10. The user shall be able to set up the application to generate a default ticket that auto-charges their stored credit card when used.**
- 4.11. The application shall support remote adjustment of ticket prices (e.g., senior discount) by TAP id through a web interface.
- 4.12. If the user has an active TAP pass, the application shall display how much time is remaining on the pass.**