

## **Evaluated by Teo Ji Hao (Number 16, SEL 2) for Lim Boon Hian (**

### **Strive for Consistency**

Overall, the design is consistent. The placement of icons is at the same area of the screen regardless of which state the app is in. For example, the Hamburger button is always top left, "X" icon to close the tab is always top left of a box. There are consistent actions such as swiping to close, consistent use of icon image.

What could be better would be to perhaps put the hamburger on the right side, as that is the side with all the other buttons that lead to more actions. The left side has a "X" button that closes things as well as the "<" button that exits the app. Putting all buttons that "closes" things on one side and all buttons that does more action on the other would be more consistent.

On the third page, the button that reveals the Filter for stairs/ramp/lift seems to be a pop-up box that differs from the rest of the design where it is a sliding tray. In my opinion it is slightly odd that the "Where to" bar is placed at the bottom of the screen but immediately goes to the top when pressed as the user's eye line will need to shift upwards to continue their actions of typing.

### **Cater to Universal Usability**

The inclusion of the ability to change language fosters inclusivity. Font size changes also increases usability for people who are visually challenged. There are shortcuts introduced like swiping to close a tray instead of having to click the "X" button which is good for more advanced users and saves time. Inclusion of a mic function to speak instead of type is also good for handsfree operation. Wheelchair accessibility is also considered. Perhaps a function could be included to cater to left and right hand people by changing the side that the buttons are at on the screen. This will be helpful in other scenarios where people have to manage tasks with one hand and hold their phone with another. An inclusion of a help button to explain the various buttons and its functions might be good as there are many icons and new users might not know their meaning.

### **Offer Informative Feedback**

On the first page under point 8, the button lighting up and having a toast message appear is a good example of offering informative feedback as this prevents users from wondering why no new information is showing when they continue swiping up. In Page 3, "F: Direction Page", Point 6, the inclusion of small rectangular bars at the bottom serves as helpful visual feedback to the user regarding the availability of other route choices and which one they are currently on.

In "E: Search Screen", autocomplete also offers informative feedback as soon as they start typing and offers potential destinations.

### **Design Dialogs to Yield Closure**

The whole experience is organised into a beginning (searching of destination), middle (selecting route) and end (navigation screen). However, a notification for arrival can be included to yield closure to the entire navigation operation by the user.

In the last page, the step by step navigation is also a good example as the current step is always highlighted. This way, the user knows that he/she is getting nearer and nearer to the destination and therefore the end of the navigation.

### **Permit Easy Reversal of Actions**

There are "X" / back buttons displayed on every page to allow user to close that page and the inclusion of swipe functionality to minimise or close pages. Recently visited locations in the Search Screen also permit users to quickly

navigate to places they have been to before as it is likely that they want to do so again. It is also useful if users accidentally exit the navigation page and they can immediately load the directions to the original destination. There is also a back button in the Search Screen.

Users can type in a new destination halfway through their journey without too many steps from Navigation Screen to Direction Page. The state transition diagram gives a good overview of how each page can be reversed.

### **Support Internal Locus of Control**

There are many customisation options in terms of route options such as taking the fastest route or the route with the least amount of walking. Users can also filter stairs lifts and escalators. All these options help to give users a greater sense of control over the route that is generated instead of feeling forced to take a certain route.

The ability to not just insert a destination and start the navigation but also to pan, zoom, rotate the map and Locate User at the main page gives user a great feeling of control over the digital map.

Ability to change font size and customise language also somewhat gives users the control over how the app looks.

There is the ability to stop the navigation halfway and does not make the user feel forced to complete the route if he/she decides to change her destination or route.

### **Reduce Short Term Memory**

In “E: Search Screen”, the autocomplete is also a good example as users can immediately see possible lists of destinations and do not have to recall the specific destination names. A list of recent places is also included so that users might see the names of destination they have been to and can immediately navigate there instead of having to remember the exact destination names.

Step by Step navigation and the display of next step at the top of navigation screen allows users to have a clear idea of the next action instead of having to remember the whole route.

The “Where To?” words in the search bar helps users to know where to type their destination and do not have to guess.

It might be better to display all available options for the lifts, stairs, and escalators at all times instead of hiding it behind another dialogue box so that the users know what has been selected or not selected. Similarly, the dropdown menu for the types of routes (e.g. Fastest, Least Walking etc.) does not allow user to know what other options are available at a glance and have to recall or expand the menu.

### **Prevent Errors**

The exit button from Main Page triggers additional confirmation which is good to prevent users from accidentally exiting the app, but a similar confirmation should be present for the “X” button in the Navigation Page in case users accidentally taps it while navigating.

The autocomplete list with floor numbers is good for preventing users from selecting the wrong destination in case there are multiple places with similar names. It will be even better if there is unit number.

### **Additional Comments**

The entire design largely adheres to the 8 golden rules and from a user perspective it feels intuitive and easy to use at the first glance!