Introduction:

Our research has shown us that it is very important to keep user-friendly design in mind when implementing the UI to interact with the mapping API as it can get overly complicated and busy very quickly. Adding customization allows for users to make the app work best for them instead of learning how to work the app. Being able to make groups or lists of destinations and locations can help streamline the usage of the app for users as well as make the app and its storage be more organized.

App 1: Google Maps

Strengths

- Accurate
- Real-time traffic data
- Allows for download of map and direction data
- Offers multiple map views
- Very user friendly
- Offers a variety of direction options, including what mode of transport and what time you want to depart/arrive.

Weaknesses

- It is not transparent with it's users on what they do with the data collected from the user
- Does not allow users to group or add places to lists
- Not much customization of the map

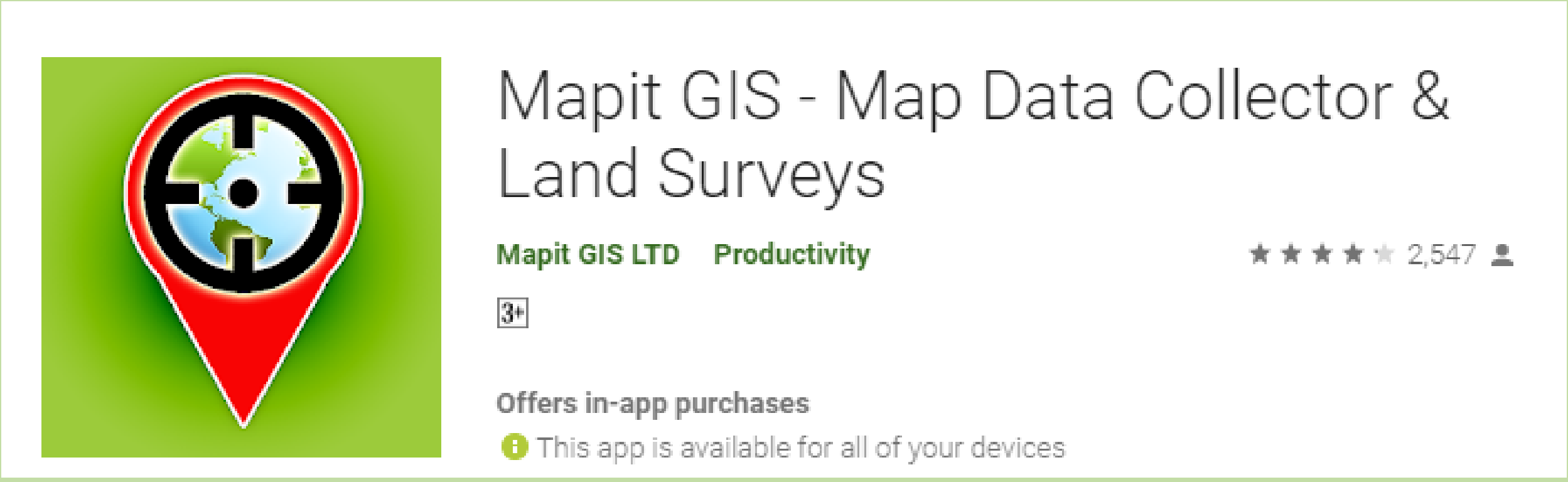
Implementation

The world view is implemented using the Google Maps API which supplies the world view, traffic data, the street view and most of the other features in this app. The app uses the current location of the user to decide what part of the world to present to the user and the app also gathers data from the user that it uses in other features such as traffic updates and speed camera updates.

Directions are given based on the two or more destinations given and the transportation method decided upon by the user and are calculated using the Google Maps API.

All the menus are done using android Navigation Drawers that they overlay on top of the map. This allows for a seamless experience and maximises the efficiency of the app.

App 2: Mapit GIS - Map Data Collector & Measurements



Mapit GIS - Map Data Collector & Land Surveys

Mapit GIS LTD Productivity ★★★★☆ 2,547

3+

Offers in-app purchases

This app is available for all of your devices

Implementation

The app most likely uses a Mapping API to get the map data and stores pin data as co-ordinates that it loads and places when the pin data is read. Arrays of these pins can be used to create the polygons available in the app. Displaying the menu was done using Navigation Drawers to make the menu slide out over the map screen. All the data can be stored online, this is likely done using an online database service.

Strengths

- Has many features
- Can be useful in niche situations or occupations
- Can locate the player accurately
- Exports to many different formats
- Can import data
- All data can be stored online

Weaknesses

- Poor UI design
- Overly complicated
- Lots of features presented are locked behind a pay-wall
- The app is hard to use and confusing
- It is very slow
- The flow of the app is overbearing and convoluted
- Directions are not available to travel to the pins dropped.

App 3: Pokemon Go

Implementation

Pokemon Go uses its own self-developed mapping software as well as the player's current live location to place the player in the right part of the map. The app then uses geographical data local to the player to determine which types of pokemon will appear around the area. The game has multiple different items used for different situations within the game, these items are most likely stored in an online database. The user's pokemon are all stored in an online database. When clicked on, the player's inventory will be displayed visually. A separate tab can be clicked to visually view the player's list of pokemon and their stats.

Strengths

- Gamifies exercising thus promoting health whilst playing a game
- Gamifies exploration thus promoting tourism

Weaknesses

- Players are unable to navigate or set a course to a certain point of interest
- Players are unable to see points of interest near them unless they are within a certain vicinity allowing it to show on screen.
- The game is only meant to be used whilst walking (for safety reasons) thus restricting possible exploration and travel.

Comparison:

The 3 apps we chose to research are all unique in the way they use mapping software. The main use is different for each application as well making it a challenge to compare them. Therefore, the best way to compare each is to break each app down into separate components and compare each.

Pokemon Go has the simplest UI design of the 3 but has the least amount of customization of settings or option selection. Google maps has many features displayed on their UI, making it quite busy but Google has put lots of thought into this and have managed to simplify it enough so as to not overwhelm or confuse its users. Mapit GIS failed to think of the user experience resulting in a complicated and confusing mess of UI.

Whilst Mapit GIS has an overly complicated UI, if one can learn their way around the app, it allows for great customization and is very useful for niche situations. Google maps does not allow for much customization except for different map views otherwise it is designed for very straight-forward usage. Pokemon Go offers no map customization.

Best Features to Add:

- Gamification
- A search function
- Grouping of places into lists

Conclusion:

Our research has shown us that it is very important to keep user-friendly design in mind when implementing the UI to interact with the mapping API as it can get overly complicated and busy very quickly. Adding customization allows for users to make the app work best for them instead of learning how to work the app. Being able to make groups or lists of destinations and locations can help streamline the usage of the app for users as well as make the app and its storage be more organized.