

Group 16, Design Criteria and Target Specifications

Abstract

This report covers the technical benchmarking of similar products to better understand what already exists and what can be improved to make a useful application using Shabodi's network-aware API. This report also outlines the design criteria and ranks them to establish priorities in the design process. Additionally, this report will update existing user benchmarking on similar applications to gauge consumer opinion.

List of Prioritized Design Criteria (5 most important, 1 least important)

Design Criteria	Ranking (5 most important, 1 least important)
Two APIs are used	5
Application utilizes Shabodi technology	5
Application is network aware - On private and/or public networks	5
Application is presentable to corporations by design day	4
The application is demonstratable	4
Admin can set and modify zones of restriction	3
Possibly multi-floor capability	2
Noticeable Notifications (Amber Alert)	2
The application is modular to other Shabodi applications	1
Fast update capable	1

Technical Benchmarking of Similar Products

- Life360 – Family and Friend Tracking App (1)
 - Able to set custom zones, requires internet/ data – public network
 - Fairly accurate with tracking – able to get around VPN – GPS based
 - Looking for something similar but smaller scale and more accurate, (floors?)

- GPS is limited to horizontal plane, no floor based
- Waze – Live updated GPS on community roads (2)
 - Reroutes and alerts driver when off course.
 - Navigation around dangerous/restricted areas.
 - Capable of estimating/ tracking elevation using the streets known elevation at certain areas.
 - Supports an API.
 - User can update the map with new roads, changes or closures to keep it accurate
 - Able to connect to other apps for easy accessibility.
- DJI GO- Drone Flying App (3)
 - Has technology to set up geofencing to restrict the areas that a drone can fly into
 - This helps drone pilots to avoid areas where the government prohibits drones to fly such as airports, prisons, nuclear power plants, and other sensitive areas
 - This application also has the capability to unlock restricted areas if the user has obtained permission to fly in those areas

Updated User Benchmarking

- Life 360:
 - Help sets minds of family members at ease (may be related to areas of restricted zones due to danger)
 - Had times of accident occurring without notifying family members
 - Some signs of GPS not working as intended (showing the person as in a different street)
 - Some complaints about customer support
- **Waze**
 - Easy to follow with the map display.
 - Updates in real-time about accidents, blocked roads, speed alerts, and even gas prices
 - Negative reviews due to privacy concerns, ad interruptions, outdated updates
 - Customized notifications/ settings.
- **DJI GO- Drone Flying App**
 - Users report geofencing of areas that should not be restricted

- Users also report that areas that should be restricted are not
- The app is not always up to date on when restricted areas are removed (A demolishing of a jail) this means that some areas will be restricted when they don't need to be

Conclusion

The client meeting allowed us to determine what sort of technical specifications the client may value for this application. The design criteria that was made has provided an insight into what functions should be the highest priority. Furthermore, technical benchmarking of similar applications has been valuable into possible methods to satisfy the design criteria.

Citations

1. Not just a family tracking app - life360. (n.d.-c). <https://www.life360.com/ca/>
2. *Driving directions & traffic reports by Waze*. (n.d.). <https://www.waze.com/apps/>
3. *DJI, the world's leading maker of unmanned aerial vehicles, Tuesday introduced an improved version of its geofencing system in the latest update to the DJI go app that controls its Phantom and inspire aerial platforms.* - DJI. DJI Official. (n.d.). <https://www.dji.com/ca/newsroom/news/dji-go-app-now-includes-geo-geofencing-system>