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Project Overview

Project aims to create Android application which would connect to the vehicle head unit by Bluetooth and allowing application to communicate with a Smart Device Link (SDL) features that are available for the car.

Newly developed mobile application “Track”, implements all possible non-media functions of SDL giving driver in-depth insight into car’s data. Having Full Lock Screen to minimise driver distraction, thus providing trip data only after it was completed.

Technologies Used

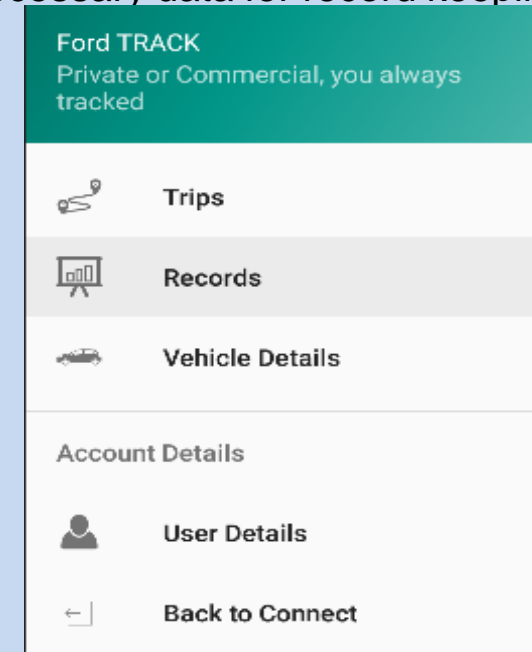
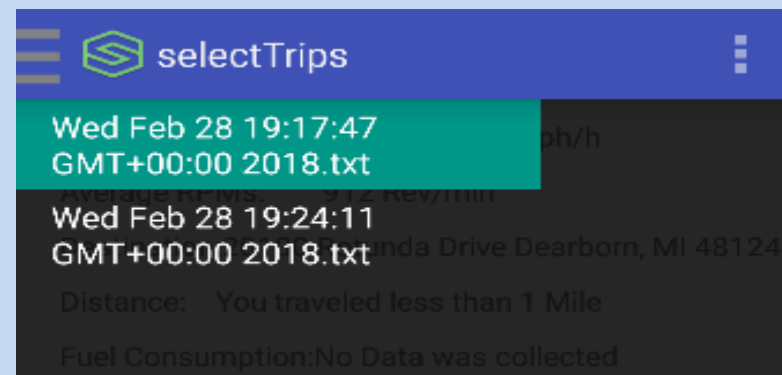
- **Smart Device Link** is open source software with two components. The core and mobile library. Core software is integrated into auto-maker’s head-unit by them and white – labelled (Ford AppLink, Toyota Entune, etc.)

- **Ford’s SYNC3 Emulator** – Testing the application and communication with the user using buttons and speech commands.

- **Android SDK** – Newest iteration of Android is used in development of the application as well as support for older iterations. Core Android is used for UI and services to communicate with the SDL proxy server.

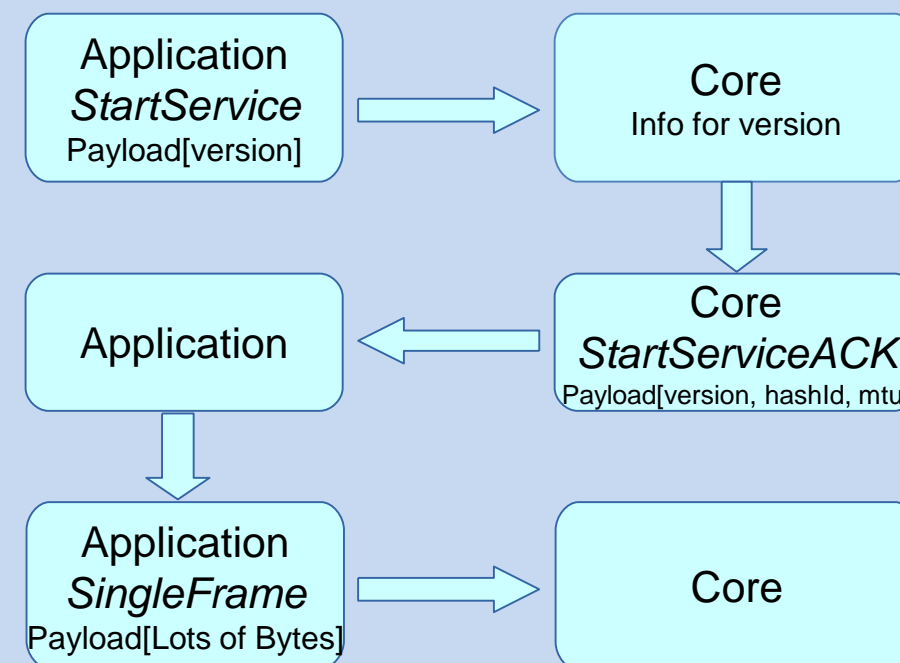
Track’s Features

- **“Trips Backlog”** allows user to select previously recorded routes.
- **“Service Notification”** allows user to set notifications for car maintenance
- **“Vehicle Records”** shows user best achievements recorded in a car
- **“Vehicle Details”** gives user access to cars model specs and VIN No.
- **“Trip”** activated by soft button or voice command, allows user to record all necessary data for record keeping.



System Architecture

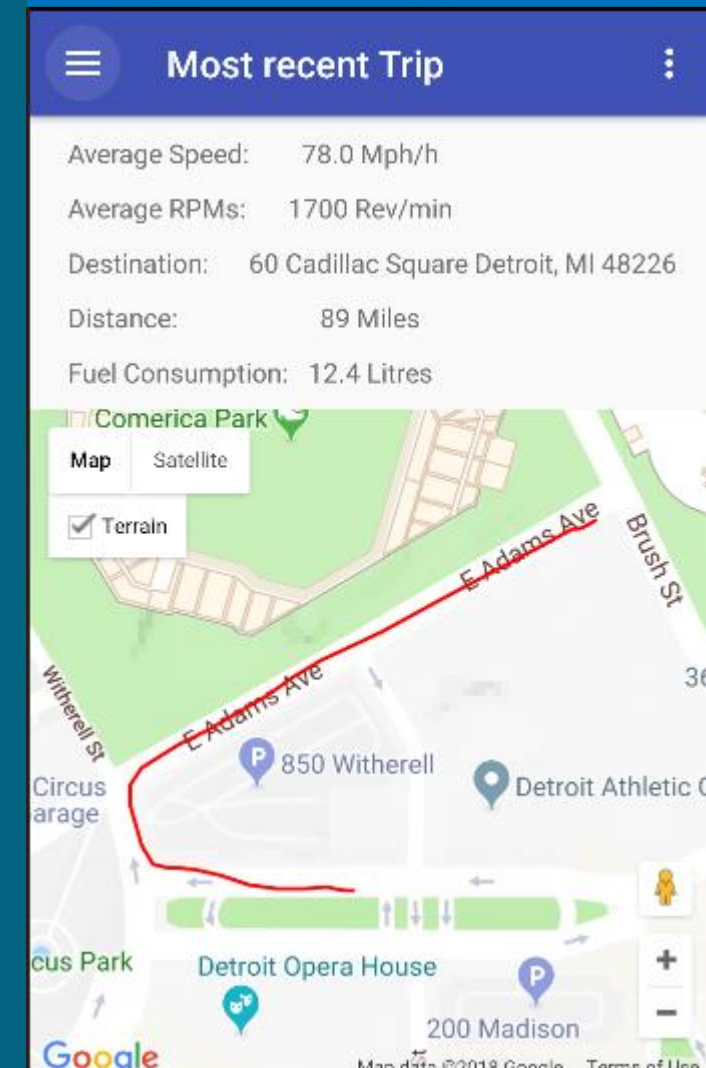
Establishing Communication



Application utilizes secure data storage allowing both vehicle’s Human Machine Interface and Android to work together sharing information without any interference. System does not allow other apps and user to access application stored files outside of running application.

Vehicle Data is gathered in concise lists for easy processing allowing program to take each data set and automatically process them to graphical user interface.

Results



Conclusions

Developing this application, we researched that many individuals and companies do want tracking capabilities for their vehicles, but existing solutions on the market provide it only with additional hardware and “Track” lets you do that all for free. Additionally many more feature will be rolling out as time progresses.