

Optimizing a Connected Car Application Suite

Connected car

Android

Hybrid application

Customer

Carrus Mobile Inc., a US-based technology company developing advanced vehicle telematics solutions

Industry

Transportation, Automotive

Objective

The customer was looking for an expert to quickly finalize their hybrid mobile application suite for tracking and recording driver's and vehicle statistics, and prepare the product for release to market.



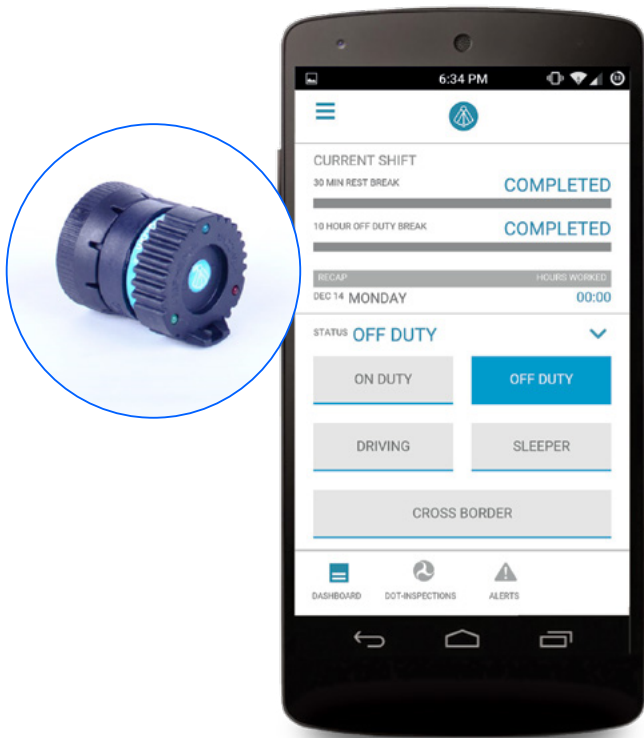
Solution

Gap analysis of the existing product

ELEKS conducted the exploratory testing of the whole application gaining deep knowledge about the system's functionality, feature completion level, defect density, and product readiness to market.

Debugging, stabilization and feature development

The team performed quality assurance and feature debugging to eliminate the discovered deficiencies and to secure the app's stability. Following the customer's requirement, we introduced the automatic driver status change feature, based on vehicle speed data analysis. ELEKS also offered a number of UI updates, adding consistency to the overall user experience.



Rethinking the connection with a physical Bluetooth device

One of the biggest challenges of the project was to establish a reliable connection between the hybrid app and the hardware component of the product: the vehicle's Bluetooth connectivity dongle. We optimized the application's communication protocol with the dongle, guaranteeing the error-free operation of the automatic driver status change feature.

Compliance testing and inconsistency fixing

Further, the ELEKS team tested the driver's status update feature for compliance with the Federal Motor Carrier Safety Administration regulations, concerning the hours of service (HOS) for drivers. We implemented a number of amendments to cover all FMCSA requirements for automatic on-board recording devices, ensuring the application does not allow any HOS logs in breach of the applicable rules.

Benefits and results

- Stabilized back end
- Critical issues fixed
- Improved app performance
- Essential automation feature introduced
- Support for the extended number of users
- Continuous integration

Tools and technologies

Android	MongoDB
HTML5/JS	D3
Java	Moment.js
jQuery	

Find us at eleks.com
Have a question? Write to eleksinfo@eleks.com