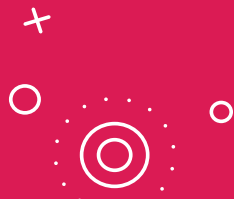




Mindtree

A Larsen & Toubro Group Company

Case Study:
Development Services
of Fleet Management
Platform for
**leading fleet
management
company**



Welcome to possible

CLIENT

Developer of commercialized software, hardware and services for the transport industry fleet operators that lead to more efficient and cost-effective processes, to more productive, safer and ecological driving and to improved customer services. With over 300 employees, they've served over 1,530 customers in 23 countries and more than 150,000 connected vehicles across the world.

BACKGROUND

Mindtree had to take a close look at all the systems that were being used by the client and understand their impact on the larger work ecosystem. Their aftermarket Telematics Control Unit (TCU) had a TI Sitara processor, Win-CE RTOS and GPRS as North-bound cellular I/f. For temperature control, there was a serial I/f between Truck-TCU & Refrigerating unit (Reefer). Additional Interfaces and sensors included USB, CAN, CAN, J1939, LIN, BT for peripheral functionalities, including ignition, door sensor, I/O devices, and more.

CHALLENGE

Owing to the singular nature of the devices being already used by the client, there was a unique set of challenges that had to be overcome. These challenges included the fact that there required to be a temperature monitoring & control system from on board unit on truck, as well as remote back office systems. Moreover, there were also multiple proprietary serial protocols for different brands and models of reefers. There were also multiple types of trailers that were in operation, both wireless and wired, which required identification through VIN numbers.

All of these features required testing as well as test automation so that the features were ready for release. In addition to this, test execution on simulator platforms - for peripherals within truck-trailers as well as cellular communications to back-office - was also a necessity.

SOLUTION

Mindtree was able to create a Fleet Management Platform through



Implementation of serial communication protocols for reefers using the framework



Creation of Human Machine interface based on Qt5



Development of features for temperature control



Proper test execution for all features in the release



Implementation of the logic to determine trailer detection



Dedicated simulation framework enhancement for supporting new reefers/serial protocols



Automated Test scripts using Javascript in Squish



Enhancements to existing implementation of over-the-air protocol



■ ABOUT MINDTREE

Mindtree [NSE: MINDTREE] is a global technology consulting and services company, helping enterprises marry scale with agility to achieve competitive advantage. "Born digital," in 1999 and now a Larsen & Toubro Group Company, Mindtree applies its deep domain knowledge to 275+ enterprise client engagements to break down silos, make sense of digital complexity and bring new initiatives to market faster. We enable IT to move at the speed of business, leveraging emerging technologies and the efficiencies of Continuous Delivery to spur business innovation. Operating in more than 15 countries across the world, we're consistently regarded as one of the best places to work, embodied every day by our winning culture made up of over 22,000 entrepreneurial, collaborative and dedicated "Mindtree Minds."