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Customer

An electronic commerce company with the biggest online store for Mobiles, Fashion (Cloths/Shoes), Electronics, Home Appliances, Books, Jewelry, Home, Furniture, Sporting goods, Beauty & personal care.

Problem Statement/Requirements

Tasked with the challenge of delivering products to their ever-growing consumers on time, the customer is concerned about lack of control and visibility over their delivery vehicles.

Customer needs to track and monitor their entire delivery vehicle on a real time basis and use this tracking data to optimize their operations, reduce cost and avoid delayed product deliveries.

Solution Methodology

SFO developed and prototyped a simple and convenient IoT based tracking device that uses a combination of GPS or GSM based tracking technology for better accuracy. This device can easily be plugged into customer vehicles and the real-time location info can be analyzed to streamline customer's fleet management and improve the product delivery.

Through the mobile app or web UI, customer can view all the vehicles in their fleet, select a specific vehicle to track and view its history and do much more. The final product had the following features and functionalities:

- Remote configuration updates using SMS
- Battery backup up to 48 hours
- Configurable sampling and messaging intervals
- Device tamper detection and alerts
- LEDs for power network and service indications
- Pocketsize and lightweight
- Micro USB recharging
- Internal buffering for reliability

Brief description of product:

A. Hardware

❖ Processor

- ARM Cortex M0
- 48 MHz speed

❖ Communication

- GPS Module
- GSM/LTE Module
- Ethernet and Wifi for backhaul connectivity

❖ Memory & Storage

- 32 KB SRAM
- 256 KB Flash

B. Software

❖ Security

- Secure transmission (TLS V1.2)
- Symmetric key encryption for last mile connectivity

❖ Cloud & Mobility

- Amazon EC2 & MS Azure cloud solution
- Android & iOS mobile application

C. Compliance

- CE/FC Certification

Impact

- Our fleet tracking solution helped the customer to gain better visibility and control over their delivery vehicles and achieved cost reduction in terms of better fuel economy through route optimization.
- We enabled the customer to safeguard their vehicle against potential thefts and from unwanted driving behavior through alerts and alarms.

About SFO

SFO Technologies Pvt Ltd, the flagship arm of the diversified conglomerate, the NeST Group provides end-to-end design-engineering-software-manufacturing solutions to clients across geographies such as the USA, Canada, Europe, Middle East, South East Asia, Japan, Australia, and India. SFO has invested in building competence, scale and standards compliant process framework, in PCBA, fibre optics, Cable & wire Harness, Magnetics, High Level Assembly, VLSI design, embedded software development, etc. SFO's capabilities transcend the plain vanilla "Build-to-Spec or Build-to-Print" EMS and our ODM+ solutions are rapidly re-defining standards for the OEMs across Aerospace & Defence, Communications, Transportation, Healthcare and Energy & Industrial domains. .



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