

April 24, 2018

TRACKING & LOCATION

Customer

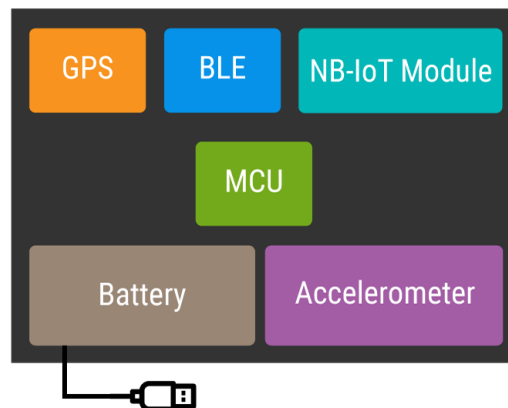
One of the tier 1 telecom network operators that provide LTE and other telecom services across the globe.

Problem Statement/Requirements

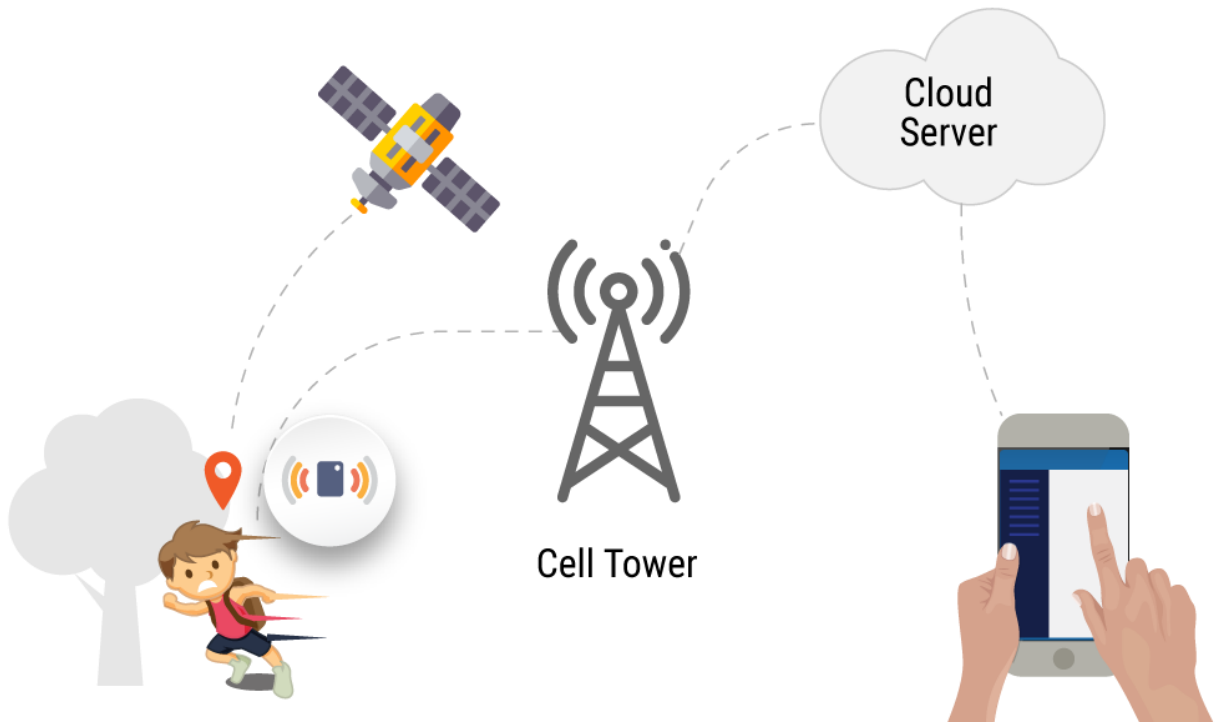
As a network service provider with a huge consumer base, the company wanted to launch a tracking tag for their customers that can locate family members, assets or anything else that needs to be tracked. Since this tag is targeted to be used by consumers in their daily life, power consumption and battery management had to be considered on an elevated priority. NB-IoT (Narrowband IoT), cellular communication technology was selected because of its unique capabilities of small data utilization and low power consumption.

Solution Methodology

SFO's NB-IoT based tracking solution enables easy and accurate, real-time location tracking and monitoring of movable and non-movable assets or people. The solution implements a real-time based monitoring using an Asset Tag that accumulates and translates the data and transmits to Cloud based server application over NB-IoT network.



The asset tag comes with dual mode location tracking mechanism – uses GPS based location tracking when the asset or person is outdoors and automatically switches to BLE beacon based location tracking while indoors.



Brief description of product:

Solution Components

A. Asset Tag

- ❖ Wireless connectivity over NB-IoT/LTE Cat-M1/Edge
- ❖ USB based recharging
- ❖ Battery backup up to a month
- ❖ GPS based outdoor tracking
- ❖ BLE beacon based indoor tracking

B. Network

- ❖ NB-IoT/LTE Cat-M1/Edge

C. Administration Apps – Tablet and Web

- ❖ GUI for system administration
- ❖ Alerts/notifications based on pre-configured rules

A. Protocols

- ❖ CoAP over UDP for payload transport
- ❖ Device Management with LWM2M over CoAP
- ❖ Security with DTLS

B. Mechanical

- ❖ IP65 grade

Impact

- Significant saving on power consumption and longer battery life with NB-IoT network
- Additional feature of indoor location tracking using BLE beacons
- Compact form factor for convenient handling

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. .



Contact:



contact@sfotechnologies.net



www.sfotechnologies.net

SFO Technologies Pvt. Ltd.

Plot No. 2, Cochin Special Economic Zone (CSEZ), Kakkanad, Kochi (Cochin) – 682 037, India. Tel: 0484 – 6614300