

ABSTRACT

Temperature monitoring of vehicles is a crucial aspect in the transportation and logistics industry to ensure the quality and safety of transported goods. TransTRACK, a logistics solution company, faced challenges with their vehicle temperature monitoring system, which initially used wired DS18B20 temperature sensors. The complex installation process, risks of connection errors or physical damage to cables, and high energy consumption posed obstacles that needed to be overcome. In this development, TransTRACK aims to replace the DS18B20 sensors with BLE Beacons technology to enable wireless and low-energy temperature monitoring of vehicles. This solution will provide easier installation, reduce the risk of physical damage to cables, and optimize energy consumption in the system's operations. By adopting Bluetooth Low Energy (BLE) technology in the BLE Beacons, TransTRACK will be able to strengthen its position as an innovative and reliable logistics solutions provider. The outcome of developing a wireless and low-energy vehicle temperature monitoring system is expected to enhance Transtrack's operational efficiency, reduce maintenance costs, and provide customer satisfaction through accurate and effective temperature monitoring of vehicles.

Keywords: Internet of Things, Bluetooth Low Energy