**CASE STUDY**

**on**

**GPS Tracker**

# Problem Statement

In the modern era, tracking vehicles and people have become important not only for private or public companies but also for state owned companies or the government. Vehicle companies are nowadays are selling vehicles on credit. GPS tracking enables development of logistics mobility solutions to help people take control and monitor fleet vehicles and manpower.

# Solution

**Tractor Tracking System– GPS based**

This Tractor Tracking System consists of a small electronic device that will be mounted inside the engine of the vehicle and powered by the battery of the vehicle. This device provides the Location Based Service (LBS), i.e. the real-time location of the vehicle using the Global Positioning System(GPS) integrated in the device. In addition, another important feature is that it provides the fuel consumption of the vehicle.

The tracking device is enabled by inserting a GSM sim into the sim slot of the device. This system can work in 2G or 3G or 4G mobile networks. Even the device is provided with a backup battery that can run for a couple of hours when the vehicle battery has completely drained off.

The Tractor Tracking System comes with a vast range of important functions that enables the DMA GPS Device to connect to the server even at remote places.

With the GPS Device being connected to the battery of the vehicle, the device can have instant connection to the server. The owner of the vehicle can view the real-time location of the vehicle either by using DMA GPS Tracking Android Application or via the GPS Dashboard.

This enables the owner to see which vehicle is in motion and towards which direction. With GPS tracking technology, you can monitor vehicle speed, routes, engine start up and shut down, idling and routes.

The owner can tell whether the vehicle is going to the assigned destination, the routes were taken, and when the vehicle is resting. It also comes in handy in locating a stolen vehicle.

Furthermore, the system provides information based on tractors like haulage status, cultivation status, fuel consumption, mileages and running hours. The vehicle can also be remotely shut-down or on from the web dashboard or mobile application.

**Hardware:**

DMA GPS Tracking Device comes in three models-

1. DMA-BW906- Supports GSM850/900/1800/1900 Quad band for global world, GPRS: CLASS12,TCP/IP, Voltage input range: 9-45V, SleepingCurrent：1.0mA@12V, GPS positioning time：Coldstart-38S(OPENSKY）Hotstart-2S(OPENSKY, GPS positioning precision：10m（2DRMS), Temperature：-20°C~+70°C, Humidity：20%-80%RH, Dimension：70(L)mm\*39(W)mm\*12(H)mm, Weight:37g

2. DMA-BW09- GSM 850/900/1800/1900 Quad band for global world, GPRS: CLASS12,TCP/IP, Voltage input range: Version B: 9–100V(for E-Bike) Version C: 9-40V(for Vehicle), Sleeping Current:1.0mA@12V, GPS positioning time: Cold start -38S (OPEN SKY),Hot start -2S (OPEN SKY), GPS positioning precision:10m(2DRMS), Temperature :-20°C ~ +70°C, Humidity:20% - 80% RH, Dimension:67(L)mm\*38.8(W)mm\*11.5(H)mm, Weight: 0.125kg

3. DMA-BW21-Positioning using GPS + AGPS(Also WIFI positioning LBS base station positioning), Device dimension:52X38X16mm, Gross weight:36g, Battery capacity: 1000mAh, support android It require GSM nano sim and supports 2G network.

**Monitoring Platform:** Web Dashboard and Android Mobile Application.

**Agent Tracking System– GPS based**

This Agent Tracking System consists of a versatile android mobile application that will be running in the mobile phones with android. The admin can monitor the real-time locations of the users and allocate tasks according to the requirements. In addition, the application provides money collection details for the admin for each mobile user and also track the progress of their tasks.

The mobile application will send GPS locations at a regular interval to the mobile applications. The admin can login into the web dashboard and monitor the real-time locations of the users. In addition, the admin can assign tasks for collecting money from the vehicle buyers on credit. When the user collects the money from allocated vehicle buyer, the user enters the amount collected to assigned tasks and completes the task. In addition, they can see the tasks assigned for each day and perform tasks. On the other hand, the admin can find how much money has been collected and how many tasks has been done by the users.

# Clients

Currently the system is running at:

* In Gazipur, Bangladesh

# Benefit & value proposition

The GPS Tracking solutions provide you complete monitor and control of your vehicles and manpower by the tip of your finger. The solution can enhance usage of vehicles and persons that increases the overall efficiency of the company. The solution helps the company better control the vehicles like shutting down the tractor if the tractor buyer fails to provide instalments and thus control them. This enables them better to track the vehicles and control them. Furthermore, they are able get statistics of the vehicles and also get buyer portfolio for future tractor sells. The admins of the company can control the vehicles and agents at a more advanced level.