

PTR White Paper on BI and Analytics

Vehicle Tracking System

SQL Server BI and SharePoint

The Industry: 'Better Safe than Sorry' seems to be the business logic behind the formation of this Industrial front!

The Security Systems Industry is a relatively new and an evolving Industry. With the advent of Technology and the increase in awareness and security of individuals, cargo and fleet, the need to have a robust system to track movement of goods and people has always been on cards. This has brought in more accountability and efficiency thereby reducing cost incurred due to loss, theft and pilferage.

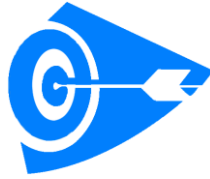
The Company: The Customer in reference is a Supplier and Re-seller of Vehicle Tracking System in India. Based out of New Delhi Region, the Customer procures, re-brands it and then installs the tracking system into the consumer's vehicle. The Equipments are manufactured in China and are assembled and installed through a network of Distributors and Vendors. The Company serves as a Reseller and Distributor where it has its own presence.

The Product: The system offers a complete range of software for Fleet Tracking and Mobile Asset Management. Apart from the Device, the system comes with the Live Reporting that provides full access to critical data and performance metrics. All Devices offer Worldwide GPS satellite tracking network coverage.

The Customer's Customers: Urban public transit authorities are an increasingly common user of vehicle tracking systems, particularly in large cities. The Cab Vendors, Cargo Services, Transport Services form the major group of users of Security Systems. Our customer too is a large Cab Service Provider with a fleet of about 450 cars, buses and Trucks that operates pan India.

The Business Case: The Device as mentioned above is a Live tracking tool and comes with Standard features as supplied by the Manufacturer. These features contain various Data points and Information about the Vehicle where it is installed. The pre-requisites are a mobile device with internet connection. These feature or information lives in the form of reports that can be downloaded on any device and exportable in XML or CSV form.

A standard reporting application that comes with the device had limited scope. Though it contains data points that could be inferred into meaningful data, more interpretation was required for the system to be said as a complete tracking device apart from being just a "Locator".



The customer wanted a more exhaustive Analysis of the information in the form of reports and recommendations. These recommendations are like triggers and pop ups for immediate action. Therefore Alerts that are customized/tailored and sent by email and text.

The need to have a tailored reporting system and analysis arose when a customer's customer wanted to obtain a detailed insight into daily operations of his fleet of cars and trucks. As said earlier, the system comes with an auto built program for reporting functionality and while to increase the prospects of selling more devices, this bespoke solution was the need of the moment. Some of the new features of the solution are illustrated in the sections below.

The new features deals with tampering, geographic boundary violation, harsh driving, towing away among others.

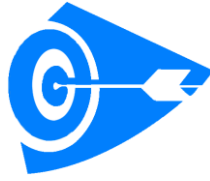
Key Benefits:

- Improve Vehicle security that detects theft and unauthorized movement.
- Reduce you Insurance Premiums and get bonus on no claim.
- Get complete real-time visibility and tracking that is current position of the Vehicle/Child/Freight etc.
- Share reports with other members of the team based on their responsibility in an easy-to-read format so you can quickly scan details that make a difference.
- The reports can be view on any device, Mobile, Computer, Tab etc.
- The Live Tracking can be viewed over the Map as well as Text.
- Manage fleet usage, Map History, GPS Position trail, Distance from Destination, Over Speed, Sensor, Fuel and CCTV footage trail and History with clear audio.
- Provide for SMS and E mail alerts.
- Reduce fuel cost, eliminate manual processes on performance of vehicle and improve the commercial viability of business.

Key Features

Software

- Live Tracking: Viewing real time location of vehicle that includes Map View and Text View.
- Reports: Generate different reports like Vehicle history, Work time, Fuel usage, Extra stopping etc.
- Alerts: Providing instant Alerts by SMS and Email that includes Tampering, Fuel Level, Geo-Fence Violation, Harsh Driving, Towing alerts etc.
- Ignition On and off feature, Tampering, Over-speed, Door Open/Close etc.
- Fleet Usage: Ideal moving speed, Stopping, Fuel, Door, Speed, Shock and Load Sensor etc.
- Sensors: Show status of all sensors installed in the vehicle like Fuel, Door, Sock, Load etc.
- Emergency Alert: On various counts like over-speeding, harsh driving, excess load etc.
- Record out of hours or unauthorized vehicle use.



Dashboard

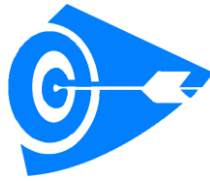
- See Everything: Easy-to-Read visuals and a simple layout that gives a closer look on the driver's real time performance.
- Driver Scorecard: Provide for a visual proof on incidents, spot habits and trends and compare driver productivity and performance.
- Measure against benchmarks for each of the metrics as defined by you.
- Vehicle wise status of key indicators and score
- Flagging of critical incidence and variations in range and limits of indicators.

Objectives that will be achieved:

1. Manage and Record performance and health of vehicles.
2. Monitor drivers' driving pattern, habits and make corrective measure.
3. Measure and Improve performance
4. Adhere to compliances, checks as mandatory by the Authorities.
5. Play a role in passenger security and the security of the society at large.







Dashboard

The screenshot displays the GPS Tracking System interface. It features a main map of India with several vehicle locations marked. Overlaid on the map are several 'Realtime Tracking' windows for different vehicles, displaying their current location, speed, and other metrics. A 'Control Panel' on the right lists 30 devices with their names and latest update times. At the bottom, there are detailed data fields for a selected device, including GPS time, received time, journey distance, location, and various sensor readings like GSM signal, satellites, altitude, and RFID.





Control Panel >>

Device


Search      


	Device Name	Latest Update	Status	Ret
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sonasonic tech (1 Device)

 Pers: 

- Track on Demand
- Set GPRS Interval
- Track by Distance Interval
- Authorization
- Set Speeding Alarm
- Set Movement Alarm
- Set Geo-fence Alarm
- Set Geo-fence Alarm(Circle)
- Set Extended Functions
- Output Control(conditional)
- Output Control(immediately)
- Triggered Alarms
- Set Sleep Mode
- Power Down
- Set Voice Monitoring Number

Command 

Model: 

Command: **Set Geo-fence Alarm(Circle)** 

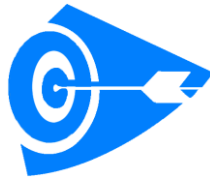
Enter Alarm:

Exit Alarm:

Latitude:

Longitude:

Radius:



GEOFENCE REPORT

Command

Model:

Command:

Index:

Enter Alarm:

Exit Alarm:

Latitude:

Longitude:

Radius:

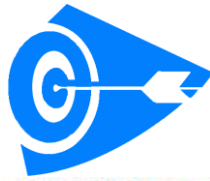


Search Alarm Information

Device Name: Alarm Type: From: To:

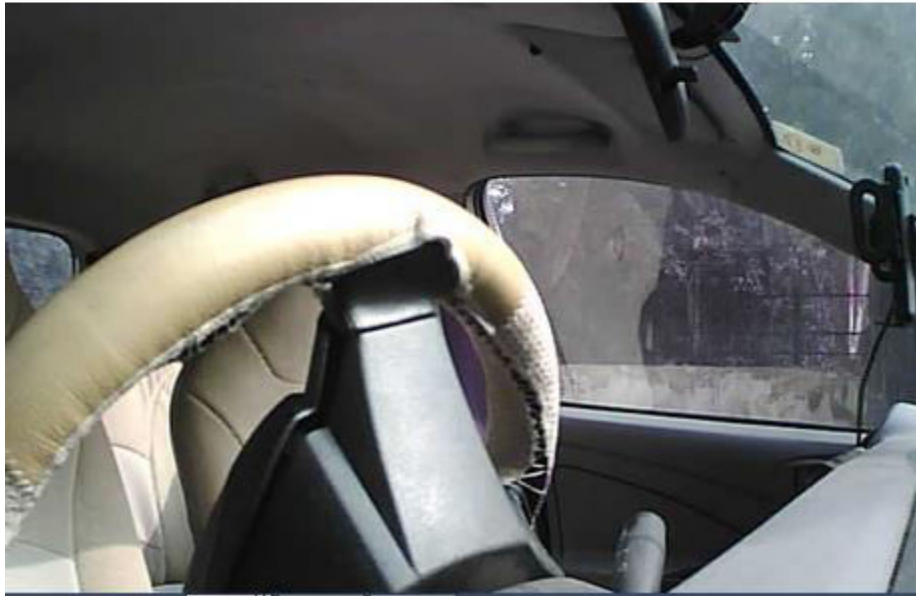
Device Name	Alarm Type	GPS Time	Received Time	Fix	Location	Latitude	Longitude	Speed
S10	Enter Geo-fence(1)	06-19 21:32:05	06-20 01:06:28	Valid	Noida - Greater Noida Expressway, Noid...	28.516748	77.384901	20.00
S10	Exit Geo-fence(1)	06-19 21:32:32	06-20 01:06:36	Valid	Noida - Greater Noida Expressway, Noid...	28.517123	77.385285	0.00
S10	Enter Geo-fence(1)	06-19 21:39:21	06-20 01:08:19	Valid	Noida - Greater Noida Expressway, Noid...	28.516260	77.385350	6.00
S10	Exit Geo-fence(1)	06-20 07:58:54	06-20 08:02:12	Valid	Noida - Greater Noida Expressway, Noid...	28.517071	77.385251	0.00
S10	Enter Geo-fence(1)	06-20 08:02:14	06-20 08:02:11	Valid	Noida - Greater Noida Expressway, Noid...	28.516995	77.385023	0.00
S10	Exit Geo-fence(1)	06-20 08:07:15	06-20 08:07:09	Valid	Noida - Greater Noida Expressway, Noid...	28.517078	77.385253	0.00
S10	Enter Geo-fence(1)	06-20 08:08:22	06-20 08:08:16	Valid	Noida - Greater Noida Expressway, Noid...	28.516895	77.385050	0.00

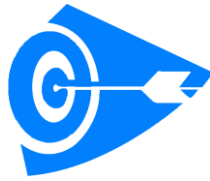
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PICTURE REPORT

	Send SMS From GPRS
	Get Picture List
	Delete All Pictures
	Take a Picture
	Delete Event in Queue
	Set Function Phone Number
	Set Voice Monitoring Number
	Set Smart Sleep Mode
	Clear odometer/run time
	Set odometer and run time
<	Read Authorize Phone Number
Command	Authorize RFID
Model:	Batch authorize RFID
Command:	Batch delete RFID
	Take a Picture





GPS Tracking System

System • Manage • Reports • Search

Map Satellite Hybrid OpenStreet Earth Control Panel Device

Manual Location Search

Search by degree/minute/second (e.g. 12/34/56.78)

Latitude: N Longitude: E

Search by decimal (e.g. 24.45763)

Latitude: Longitude:

POI

POI Name	Latitude	Longitude
Sonasonic	28.515197	77.372932

Get Directions

Search

From:

To:

Directions

Sector 18, Noida, Uttar Pradesh, India 20.4 km (about 17 min)

1. Head **south** 53 m
2. Turn **left** 110 m
3. Turn **right** 240 m
4. Slight **left** 240 m
5. Take the **1st right** 850 m
6. Turn **left** toward **Noida Greater Noida Express Way** 750 m
7. Turn **left** onto **Noida Greater Noida Express** 6.3 km

Status Alarm Location

Device Name:	Personal Tracker	Fix:	Val:
GPS Time:	12-04 18:21:53	Latitude:	28.515197
Received Time:	12-04 18:21:44	Longitude:	77.372932
Journey(KM):	2578.09	Run Time:	44d
Location:	GPS Location:Noida Greater Noida Express Way, Noida, Uttar Pradesh, India		

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