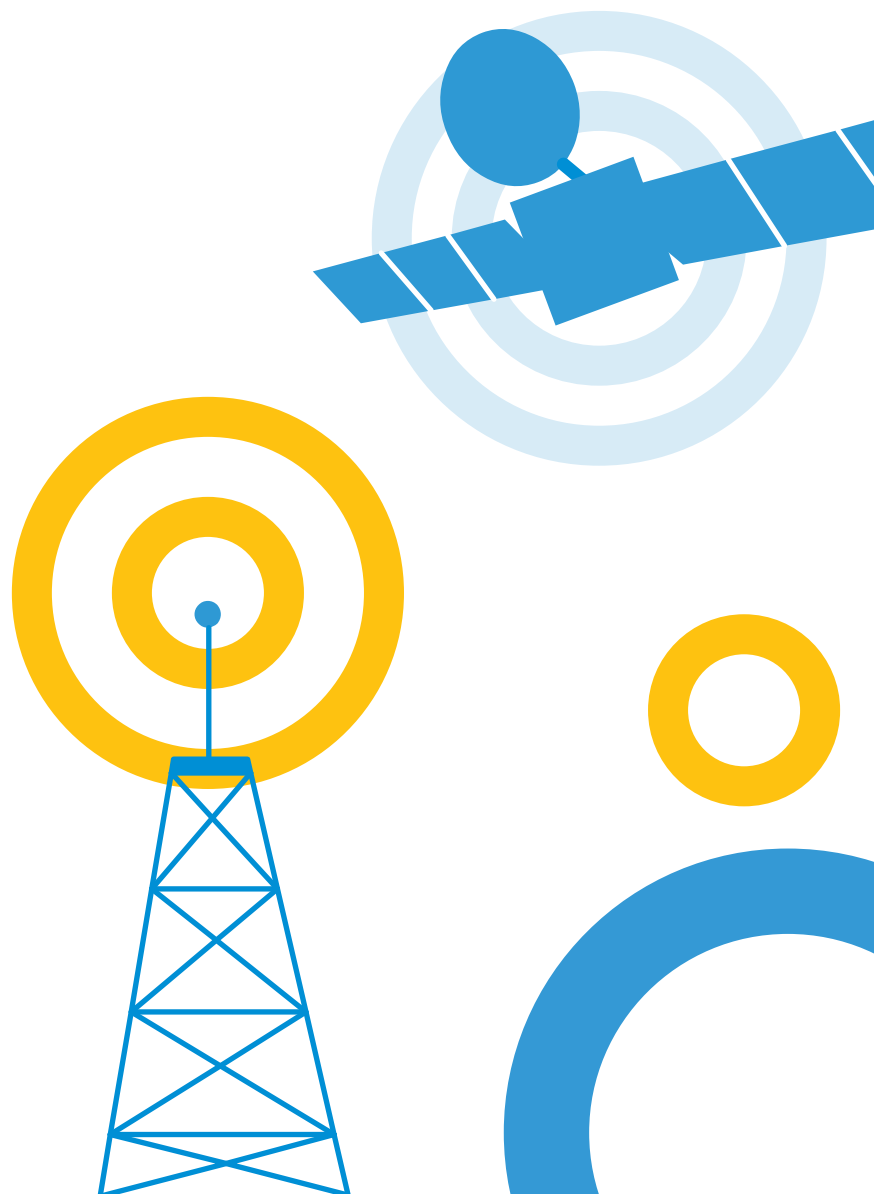


VEHICLE TRACKING SYSTEM

Real-Time Vehicle tracking solution

Vehicle tracking solution enables to monitor the entire fleet in transit spread across India, which can be monitored from a central location. These locations are subject to TTSL services being available in that city/town/Highway. Customer needs to deploy the physical Vehicle Tracking Unit in every vehicle, which Customer intends to monitor during the transit from one location to another location. The vehicle equipped with this vehicle-tracking unit will transmit the location-based information at predefined time intervals to the Central Monitoring Station. Customer can access the information at any point of time from any where about all vehicles in transit all across India from the central location.

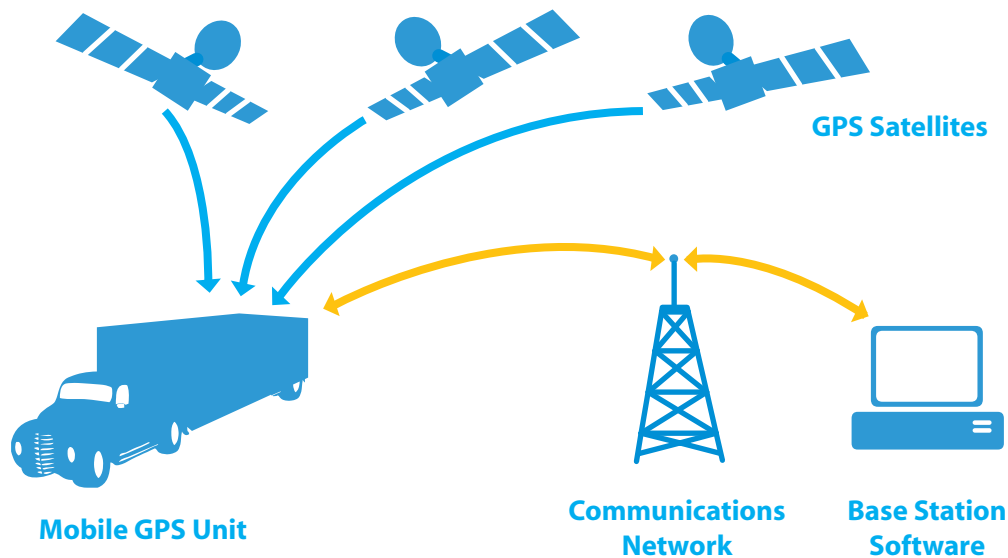


VEHICLE TRACKING SYSTEM

Solution Architecture

Vehicle tracking solution comprises of following parts.

- Vehicle tracking unit with inbuilt GPS, CDMA modules to be fitted inside the vehicle
- Tata Indicom CDMA communication network
- Fixed site Central base station equipped with GIS software



Vehicle tracking solution architecture

Vehicle tracking solution unit is a microprocessor based electronic device, which has an inbuilt GPS, CDMA module. The GPS unit periodically collects location information including latitude and longitude and is transmitted by CDMA module as packet data to the fixed site central base station (managed by Micro Technologies (I) Ltd.) using Tata Indicom's CDMA network. The vehicle owner can monitor the position of his vehicle by connecting to web portal at www.microfms.net through Internet

Note:

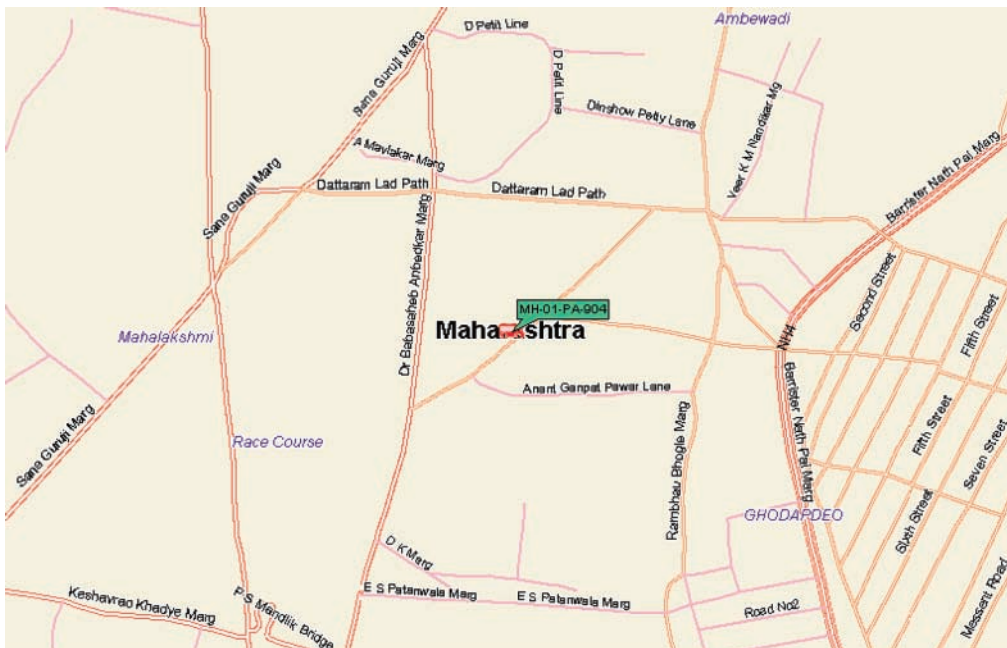
- The above solution would work only with Tata Indicom CDMA network.
- The VTS unit would work only when the antenna is facing the open sky.
- The VTS service would work only in Tata Indicom's RF coverage area. In case of non-coverage area, all SMS/Voice/Data services would not work. During that time the vehicle positioning details would be temporarily unavailable till it comes back to coverage area.

VEHICLE TRACKING SYSTEM

Login Screen




Vehicle location report – Vehicle in Mumbai



VEHICLE TRACKING SYSTEM

Details about vehicle


Vehicle	Date	Time	Area Name	Speed	Mode
MH-01-PA-904	07/26/2007	11:34:15	Jai Hind Cinema	0	CDMA DATA

Vehicle	Date	Time	Area Name	Speed	Mode
 MH-01-PA-904	07/26/2007	11:34:15	Jai Hind Cinema	0	CDMA DATA

Vehicle location report – Vehicle moving in Delhi.



Details about vehicle

Vehicle	Date	Time	Area Name	Speed	Mode
 DL4CU7753	07/31/2007	11:16:41	3.24 Km From RS	0	CDMA DATA

Report – Current vehicles position report

Vehicle No	Current Location	Time	Speed(Km/hr)	Status
<u>DL4CU7753</u>	3.24 Km From RS	07/31/2007 11:16:41	0	Stopped
<u>MH-01-PA-904</u>	Jai Hind Cinema	07/26/2007 11:34:15	0	Stopped
<u>MH04H1500</u>	2.69 Km From Hajlra	06/21/2007 12:54:41	0	Stopped

VEHICLE TRACKING SYSTEM

Vehicle movement details report

Vehicle Movement Details

Report Criteria : Daily Report (7/31/2007)

Vehicle No. ----Select----

Select Type of Report

<input type="checkbox"/> Vehicle Current Performance	<input type="checkbox"/> Transit & Stopped Report
<input type="checkbox"/> Transit Report	<input type="checkbox"/> Vehicle Trip Report
<input type="checkbox"/> Idle Report	<input type="checkbox"/> Speed Report

From Date : 7/31/2007 Date To Date: 7/31/2007

Vehicle report

Vehicle Report

Vehicle No. -select-

Select Type of Report

<input type="checkbox"/> Engine Details	<input type="checkbox"/> Registration Details
<input type="checkbox"/> Tripsheet Details	<input type="checkbox"/> Driver/Cleaner Details
<input type="checkbox"/> Insurance Details	<input type="checkbox"/> No. Of Trips

VEHICLE TRACKING SYSTEM

Vehicle movement details report



The screenshot shows a web-based form titled "Driver Report". It includes a dropdown menu for "Driver Name" with a "-select-" placeholder. Below this is a section titled "Select Type of Report" with four radio button options: "Driver Details", "Salary Details", "Tripsheet Details", and "Expense Details". At the bottom, there are two date input fields: "From Date" and "To Date", both with "7/31/2007" entered and a calendar icon to the right.

Know more about Tata Indicom Vehicle tracking solution

To capture the major chunk of telematics market, Tata Indicom has formed strategic alliance with Micro Technologies India Ltd. Vehicle tracking solution comprise of -

Micro Vehicle Black Box:

Navigator a vehicle management solution is a combination of vehicle tracking and Internet ensuring efficient and intelligent management of your vehicle, fleet or assets. Our unique hardware designs and sophisticated mapping technologies provide the tools to run a productive and cost-efficient fleet. It also assures better security to assets, wherever it is. Monitoring and managing the mobile assets are the core functionalities of any company dealing with the services. Technologies help in supporting these functionalities from remote locations and update the concerned person with the latest information of their mobile assets. For optimal utilization of the mobile assets, it is required to collect and analyze the information of the assets. The information might need to be collected simultaneously as the vehicle is operational.

Vehicle tracking system can efficiently monitor and control the vehicles, is emerging in many areas. GIS and CDMA / GPS technology linked with means of wireless communication are essential to the system determining the vehicle location. It is required to have a technique to handle the huge amount of spatial data entailed in a digital road map in order to trace the accurate position within a reasonable time.

VEHICLE TRACKING SYSTEM

Vehicle Management [Web Based Solution]:

Fleet Monitoring System is a web based tracking solution using GIS and messaging device. This ingenious box senses any event of vehicle and immediately communicates such events to the registered users using web. To enhance flexibility there are different ways to track and locate vehicles in real time. The system can also be programmed to pinpoint vehicles at regular time intervals, ranging from daily or hourly snapshots to minute-by-minute updates. A Vehicle Tracking Unit combining a CDMA / GPS satellite receiver installed in every intended vehicle. The information is delivered to a secured Web solution that's updated as mentioned interval, offering them tailored reports suiting their needs. User can zoom in to street level to find individual vehicles and can even adapt the service to track field-based personnel. System offers business a straightforward way of tracking company vehicles, whether monitoring delivery vans, maintenance workers or a fleet of cars. It works across the country. Benefit from knowing the exact position of each vehicle / fleet, what speed they are traveling and where they have been? Using Vehicle Management System you can view this information online 24 hours a day, 7 days a week or request reports displaying historical vehicle movements. System can be used for monitoring the travel activities of vehicles, and as an aid in keeping travel records such as reports related to performance of vehicles.

Geographical Information System [GIS] Support:

Vehicle Management system is equipped with Map server, that is capable of digital map data extraction, image rendering, geocoding, and geoqueries. The vehicle location information is plotted on the map in a real time basis. The online track mode of the client viewer shows the present position of the vehicle. The maps will be dynamically updated on receiving new location information. The playback mode is designed to assist the fleet managers to view the past locations of the vehicle in a highly interactive way. Some of the viewer capabilities include: pan or move through the maps extent, zoom in and zoom out map data, query spatial and attribute data, find out locations, print maps, e-mail maps etc. The report creation of the tracking system is highly customizable and the reports are printable. The custom reports include travel reports, travel reports with speeds, location report, speed summary, odometer report, fuel consumption, daily utilization etc.