

## GPS Vehicle Tracking System

A GPS vehicle tracking system is a computer hardware and software system that receives, processes, and displays real time location information from the Global Positioning System (GPS), which is a space-based global navigation satellite system that provides reliable location and time information in all weather and at all times.

A GPS vehicle tracking system usually consists of GPS receivers, GPRS network, Internet, Central server computer, and terminal computers (see Figure 1 below). A GPS receiver is placed on each vehicle to receive the real time location of the vehicle from the GPS satellites and transmits this information to the GPRS network as a cell phone does. The GPRS network transmits the location information further to the Internet. The Internet transmits the location information to the central server. Terminal computers, which could be a workstation, laptop, or a smart phone, display the real time location of vehicles on the map, along with various reports and statistics.

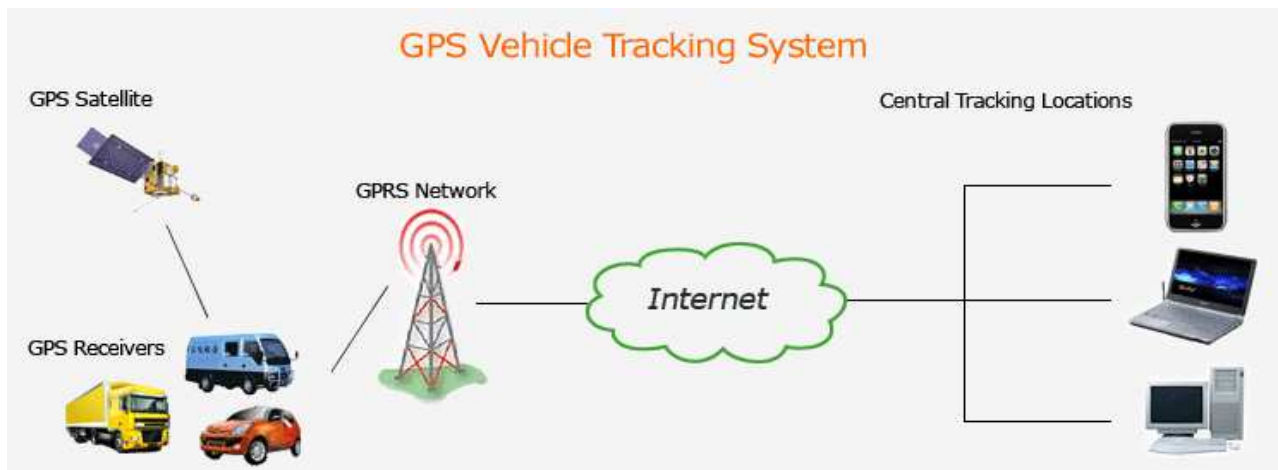


Figure 1 GPS Vehicle Tracking System

Typical applications of vehicle tracking systems for businesses are:

- 1) Fleet management
- 2) Mobile force management



Figure 2 Applications of GPS Vehicle Tracking Systems



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- 3) Real time bus or transit schedule services
- 4) Shipment tracking by specialty courier

A dispatcher would be able to monitor the real time location of each vehicle in the whole fleet; and a manager would be able to monitor and manage his field employees on duty for customer site repair, delivery, and other services. A specialty courier will be able to address any client inquiry about the location and path of any critical shipment. And a bus rider can check when the next bus will arrive at the bus station.

The major benefits from a vehicle tracking system are:

- 1) **Reduced cost:** Idling and speeding both affect fuel economy. By monitoring idling and speeding, significant fuel cost can be reduced. Further, with real time data on vehicle movements, overtime and unauthorized vehicle use can be reduced, this will lead to reduction in cost.
- 2) **Increased Productivity:** System provide real time monitoring and detail reports to measure the performance and activity of the day, week, month, or year. This will increase productivity, and reduce unauthorized use.
- 3) **Improved Safety:** By monitoring speeding and unauthorized uses, safety can be significantly improved, which will translate into lower insurance rates and other related costs.
- 4) **Happier customers:** With GPS vehicle tracking system, you can readily tell your client exactly what the current location of your vehicle and when the field repairman will arrive for the next stop. You can even let your client monitor the route and movement of your vehicle and driver on the map. You will be able to address any inquiry about the location and path of any critical shipments
- 5) **Greener fleet:** Cut idling time and speeding will save fuel consumption, and reduce emissions.

### **For Further Information:**

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