Automatic Vehicle Identification System

What is Automatic Vehicle Identification System?

The automatic vehicle tracking or identification facility delivers the flexibility, scalability, and responsiveness that today's organizations need. It provides accurate, up-to-minute information, high- speed communication, and powerful analysis features required to make better decisions faster. The major potential comes from the much acclaimed no line of sight and simultaneous reading properties of RFID. It is now widely recognized that real – time vehicle information will revolutionize the control and logistical organization with significant vehicle fleets. In a global marketplace where productivity is crucial to success, vehicle fleet operators use vehicle management systems as a formidable tool to drive down costs and increase the value of their service.

Why Automatic Vehicle Identification System?

Being in the manufacturing and transportation business, availability of vehicles and operational efficiency are crucial areas. Due to manual processes, the companies are finding it difficult to determine the exact cycle for a vehicle carrying goods from the factory to a particular destination and carrying raw material as a return load back to the factory. With a mission to improve operational efficiency in terms of cycle-time monitoring and fleet management, the companies are ready to adopt technologies that take care of vehicle tracking.

Also, earlier, no knowledge of status of the consignment was available, which was leading to deviations in vehicle requirement planning. The Key issues in the current scenario are

- Higher error possibilities
- Permit slip is not identified with the vehicle's Identity
- Higher measured weight than actual Possibility of double weighing
- Possibility of two admission/ permit numbers
- Manual entry leads to higher
- possibility of human error

Functional details:

Manual check-in processes can cause errors and delay in accounting for vehicles, especially during peak times when vehicle backlogs often occur. Some vehicles might be missed altogether and vehicle or driver IDs can be logged in error.

To automate the vehicle moment in we need to install Long Range RFID readers in entrance exit locations These readers are connected by internal LAN and are connected with central server. Our offered solution identifies the vehicles at all entry & exit points. The RFID tags are issued permanently to the vehicle.

During the entry exit process the vehicle movement will be identified and any deviation the same will be flashed to the control room through dashboard that can be generated as reports. To make the process easy issue passes for monthly, half yearly and yearly basis.
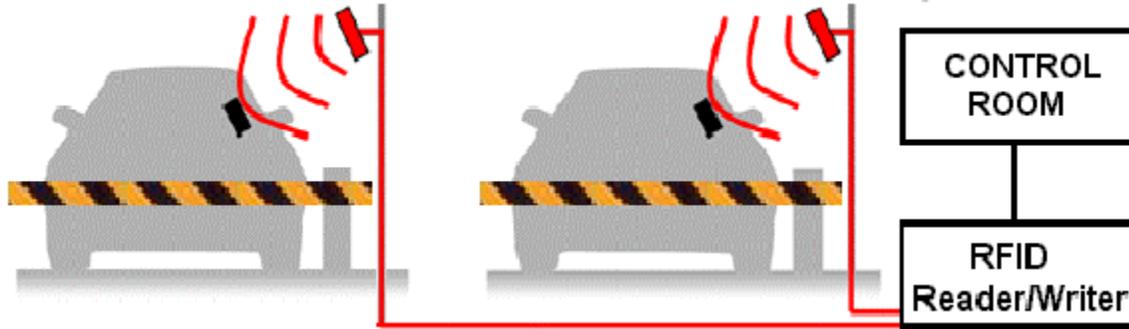
Tag Issuing :

Long-range RFID based Vehicle Tags & personal Tags are issued to all the vehicles entering the plant. This is done at specified entry gates by the security personnel using the tag issue application running on the desktop computer.
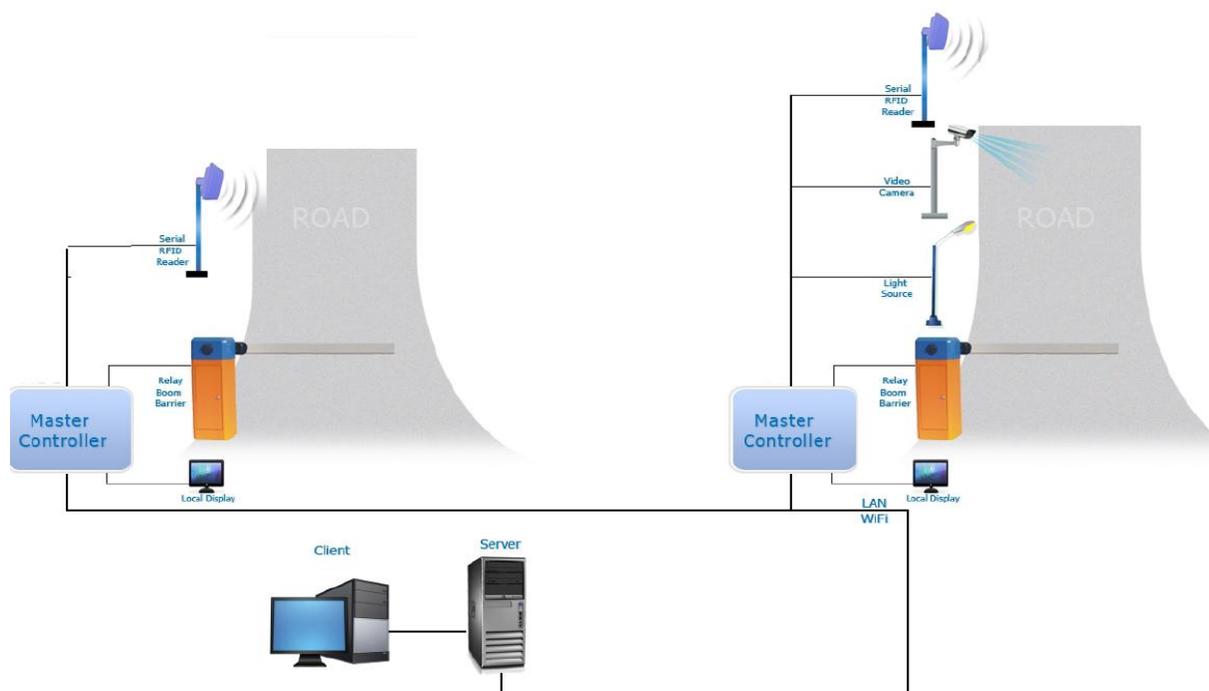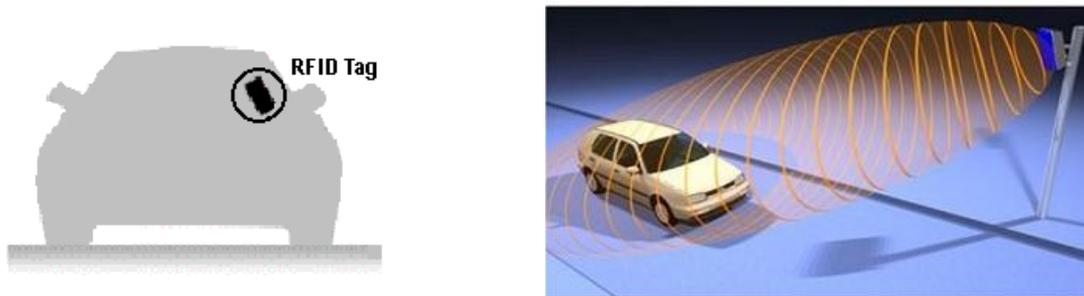
Features of Automatic Vehicle Identification System

Radio Frequency Identification (RFID) devices consist of tags and readers that assist in the tracking of goods and vehicles. Tags are the devices that give identity to the vehicle and work like a wireless name plate. It transmits it identity to readers which are placed at strategic locations like entry/exit of a premise, highway, weighing bridge, parking lots and others. Readers pick up these signals and transmit them to the centralized data servers from where the information can be viewed or utilized anywhere. These readers can also trigger the other peripheral devices like an access control mechanism- boom barrier to operate as per the business logic. For. e.g on identifying a known vehicle, a reader can signal the boom barrier to open and allow the vehicle automatically. The read-range of the reader varies from 1m to 30 m depending upon the technology (Passive Vs Active) in place.

The use of RFID technology also necessitates the purchase and utilization of either fixed or hand held readers which can help the guard to quickly access the vehicle information by bringing the device near the vehicle.

Benefits of Automatic Vehicle Identification System

1. Tracking vehicles within the plant: The use of RFID in a vehicle assembly line ensures optimum operation, enhanced efficiency and eliminates the possibility of fraud and theft. Strategically positioned fixed RFID readers with multiple tags reading capability trace the newly finished cars as they leave the product line. In this way vehicles can be tracked throughout the plant.

2. Prevents manipulation of data: The security issues RFID tags to the trucks that are coming inside the premises. It is attached to the truck that carries the cane load and identification is done throughout its journey.

3. Better Fleet Management: RFID has enabled better fleet management. Now the transporters have a fix on reasons behind vehicular downtime. They know how long it takes to load raw materials and they can measure the performance of drivers. Transporters can plan availability of trucks based on the latest tracking data and make optimum use of their fleets.

4. Parking Lot Access Control: We also provide parking barrier drop-arm control systems to control authorized access into and out of the parking area. RFID based access control systems ensures that only authorized vehicles can get into and get out of the parking area. Parking barrier arms automatically lifts to let the vehicle pass through on success identification of the vehicle RFID tag.