

Case Study

Automatic Vehicle Identification and Access Control

Client

A Leading Logistic Service Provider in the Middle East

Statement

To identify vehicles arriving at the yard's gate, validate the vehicle automatically and allow access to the vehicle based on the credentials.

Technology

Radio Frequency Identification based Automatic Vehicle Identification

Description

The client had a huge parking lot from where it operated a fleet of about 600+ trucks for dispatch of cargo.

Some of concerns of the client were:

- To keep a check on credentials of the vehicles entering and exiting the parking area
- To identify the availability of vehicles
- To quickly and easily find which vehicle is parked in which Bay
- To analyze the average duration of each vehicle in the parking lot

In view of the above requirements from the client, an ideal choice for the right solution was to use Radio Frequency Identification (RFID).

Each vehicle was affixed with a UHF RFID Tag. RFID Antennas were installed at the entry gate in such a manner that a vehicle would be identified from even about 5 meters. As the vehicle would approach the Parking area's gate, the system would read the RFID tag, retrieve the vehicle information from the central database, validate the vehicle's credentials and open the Boom gate to allow entry to the vehicle. The entire operation would take around 10 seconds to complete.

The system reduced the traffic considerably at the entrance of the parking lot and eliminated lengthy manual authentication of vehicles, thereby reducing manpower requirements at the entrance. The system also recorded the timestamp of each vehicle entering the parking area.

Each parking Bay was also equipped with a UHF RFID tag to uniquely identify the Bay. Periodically, one person would walk around the Bay with a handheld RFID

reader, recording the combination of Vehicle and its Parking lot. This information was synchronized with the back-office server. Thus a real time occupation of Bay by truck was available in the server.

Each truck leaving the terminal was identified at the exit gate by RFID. The vehicle's exit was recorded by the system along with the time stamp.

Tangible benefits

- Reduced traffic at Parking area's entrance
- Smooth operations for incoming and outgoing vehicles
- Optimal utilization of parking Bays
- Detailed MIS regarding Vehicle time spent in Parking Area
- Reduced manual labor