



LARGEST LEBANESE OIL AND GAS DISTRIBUTOR USES RFID FOR DISTRIBUTION OPERATIONS MANAGEMENT

Managing the distribution of critical and hazardous oil and gas products is an operation challenged by regular customs audits and tight security regulations. The distribution facilities must be secured and controlled at all times. The operations should be tracked all while insuring a smooth and effective flow of procedures and facility utilization.

CHALLENGE

MEDCO is the largest Lebanese full product line petroleum company providing its customers with fuel for transportation, energy for heating and lighting, and most of all innovation in value-added services. MEDCO needed to gain full control over the distribution process to insure optimal resource utilization and process security for their distribution facilities.

MEDCO was searching for a system that offers secure, accurate and efficient access control to their facilities; the system would have to manage the operation of all vehicles and it would have to integrate with the company's Oracle based accounting system for operation visibility and access granting procedures.



Active Identity, an RFID integrator and platform solutions provider, have approached MEDCO with an EPC Compliant UHF (866MHz) RFID solution using Alien Technology readers and tags and the active ENVOY for infrastructure management and back-end integration.

“After performing the site survey and understanding MEDCO’s needs, it was clear to us that the best solution would be using UHF, RFID technology” says Ramy Dagher, CTO of Active Identity. “RFID tags are small, secure and maintenance free, aspects required for any vehicle management application!”



SOLUTION

Active Identity designed and deployed a complete RFID system using Alien Technology UHF products. The entrance/exit gates were equipped with the ALR-9900+-EMA readers and the Alien Technology linear antennas to insure optimal accuracy and compliance with local regulations and international standards.

The Alien Higgs3 G inlay is used to identify the different vehicles in operation; the G inlay's antenna is perfectly tuned for windshield applications with impressive performance. The combination of the Alien reader and tags also allowed the usage of the Dynamic Authentication feature to insure that the tags cannot be cloned and duplicated.

The active ENVOY is installed in the facilities server cabinet and connected to the backbone network. All the readers are controlled, managed and monitored using the active ENVOY's management console. The active ENVOY's web services were used to provide full integration with MEDCO's back-end Oracle Forms accounting systems.

"The changes were minimal" says Joe Barakat, IT Manager of MEDCO. "The systems communication and data integration was seamless! This was really impressive, especially when compared with other systems we had to work with in the past."

Two very important requirements were handled by the integration:

1. Vehicles are only allowed to enter if they are assigned a delivery ticket.
2. Vehicles are only allowed to leave after the weighing and invoicing process is complete.



The needed workflows for this operation were created using the active ENVOY's graphical workflow designer to handle all communication between the readers and the accounting system. When a tag is identified, the ENVOY interrogates the Oracle databases for the vehicle status, based on the response, either access is granted, or a red light is turned on for visual notification. All force entry operations for untagged vehicles are also managed and controlled through the system; at every force entry operation, the ENVOY takes a snapshot from the cameras installed on site and reports the transaction to the Oracle databases.



RESULTS AND BENEFITS

“The distribution facilities operation was dramatically improved after installing the RFID system from Active Identity,” explains Maroun Chammas, Managing Director of MEDCO. “The results were tangible from the first day of operation!”

The solution deployed guaranteed that all entrance and exit operations to the premises are managed and tracked without any human intervention; the security officer does not have to write down anything, and the driver does not have to hold or press any buttons! All the system transactions are reported in real time to the Oracle Forms systems to generate multiple valuable reports concerning facility and vehicle usage.

“The complete solution was seamless to our workforce and out clients.” Maroun adds. “We were able to improve our distribution procedures with minimal infrastructure changes.”

NEXT STEPS

MEDCO is planning to deploy RFID technology to complement their “Self Service” and “Litres Plus” combination at the petrol stations. MEDCO’s innovative approach will allow the correct identification and automated billing of MEDCO’s clients.

“The active ENVOY will help us manage and control thousands of transactions per day at our 400+ petrol stations network” says Joe. “The consistent performance and technical support we are receiving from the Alien hardware and the Active Identity team are crucial incentives to carry on with this venture.”

This would be the first nationwide RFID deployment in Lebanon, Active Identity is planning to use Alien’s Higgs3 chip in a tamper evident format in this project. “The technology application benefits are limitless, it comes down to finding, designing and testing the correct solution for every problem.” adds Ramy.