

Abstract

Use of RFID and GPS technology in logistics practices in Sri Lanka is still at a basic level. Gaining advantages through implementing an integrated system of RFID technology and GPS technology into a vehicle fleet is practically unknown. Therefore the results derived by implementing RFID and GPS technology is analyzed, in the company's ,the end users', as well as the drivers' standpoint. In this particular scenario, a vehicle is equipped with an active RFID card, a Passive RFID card and a GPS monitoring unit. The RFID cards are used for tracking within the plant and obtain timings spent at each point within the plant (which eventually adds to the overall Load Cycle Time). The Passive RFID Card is used for identifying the vehicle which enables quick processing of transactions without having to enter the vehicle information into the system manually. GPS is used for real time monitoring of the vehicle and recording the times that the vehicle enters the customer site and leaves the customer site. Consequently as a result of this project the Load Cycle Time reduced by 31% and the number of incidents reported has reduced by 35%. Further this system shows that even the users at a lowest end are able to use the system because 84% of the drivers said that the system is easy to use.

Next the Technology acceptance model is used to predict the system users on their behavioural intention to use in relation to their perceived ease of use of the system and their perceived usefulness. The results showed that there was a relationship between behavioural intention to use and their perceived ease of use. This also portrayed that there was a relationship between behavioral intention to use and their perceived usefulness. Therefore the system designers can take into account both the perceived usefulness and perceived ease of use when improving the system to ensure that the end users will intend to use it as expected.

Key terms: RFID, GPS, Technology Acceptance Model, Vehicle fleet

