



Vehicle Tracking & Management System

DRIVING VEHICLE EFFICIENCY IN REAL-TIME

The Vehicle Tracking & Management Solution (VTMS) provides real-time information to track, measure and manage vehicles anywhere within the facility, both indoors and outdoors. VTMS is a groundbreaking step in automating vehicle tracking and management in today's vehicle assembly, delivery chain and fleet operations and is the first solution to provide real-time information to today's manufacturing management community. VTMS allows a vehicle manufacturer, delivery chain or fleet operation to know in real-time or historically exactly where the vehicle is located or has been, with accuracy to within 3 meters. VTMS communicates the physical location of vehicles either by zone, parking slot, and/ or intelligent interactive graphical mapping. VTMS is designed to support either repetitive or job-order manufacturing operations, with a focus on areas of the business and processes where units are "off-line." These off-line areas typically include post-assembly verification and test processes, as well as quality repair, containment and shipping zones. Off-line processes are frequently a forgotten segment of lean manufacturing and VTMS is one of the world's first systems to drive efficiency and optimization in this area.

In a VTMS solution, an RFID tracking tag is placed in each vehicle typically before the vehicle enters the off-line processing areas. Supported by a standardized ANSI 371.1 and IEEE 802.11 infrastructure, the solution delivers real-time tracking information of the vehicle as it moves through off-line certification, repair and containment areas with constant location data for each vehicle.

In addition, beyond the ability to locate a vehicle on demand, the tracking data can be used to monitor such things as adherence to process, process cycle time, and dwell time analysis for off-line areas.

VTMS provides for accurate planning, execution and monitoring of performance — making it the ultimate support tool for improving processes and creating efficiency in off-line manufacturing areas.

VTMS Benefits

- Increase vehicle throughput
- Improve Order to Delivery (OTD)
- Reduce dwell-time
- Increase labor productivity
- Minimize work-in-process inventory
- Improve inventory accuracy
- Reduce operating costs
- Increase vehicle utilization in fleet operations
- Reduce labor cost per vehicle

RTLS Architecture

- Tags & Call Tags
 - WhereTag IV
 - WhereTag IV
 - WhereCall III+
 - WhereTag III TL/TLB
 - WhereTag III ST-HO
- Exciters
 - WherePort III
 - WherePort III HD
- Infrastructure
 - WhereLan LOS
- ConfigurationTool
 - WhereWand II
- Middleware
 - Visibility Server Software

Features

VEHICLE EVENT MANAGEMENT

The VTMS Vehicle Event Management feature automates vehicle status changes, reduces labor intensive barcode scanning, and triggers transactions with zero human intervention. The WherePort II or III vehicle event management device is proximity communication device that is used to trigger a WhereTag III or IV to alternately “blink”, triggering the event to occur.

VEHICLE PROCESS MANAGEMENT

The VTMS Vehicle Process Management feature automates the delivery of vehicle process metrics and reporting and ensures the process verification through the predetermined vehicle’s process map. VTMS provides a business rules engine and a user defined alerting engine, ensuring the vehicle’s path is monitored, measured, verified and reported through its process map.

PROCESS CONTROL MANAGEMENT

The VTMS Process Control Management feature automates the metrics gathering and reporting on “process steps”, such as cycle time measuring. In addition, VTMS application provides a business rule engine and a user defined alerting engine that, after proper configuration, ensures that a “process step” is monitored, measured, verified, and reported on when deviations are determined.

VEHICLE THROUGHPUT MANAGEMENT

The VTMS Vehicle Throughput Management feature automates and optimizes the vehicle throughput of offline and yard areas with an active throughput management engine that directs the movement of all vehicles. By creating a process map for every vehicle, knowing the current inventory location, deducing the “process step” or “containment area” capacity and the FIFO ordering of vehicles, the throughput management engine actively manages and optimizes the vehicle movement. VTMS communicates this information with users via desktop computers, Windows Mobile Terminal WIFI devices, Production Control Boards, and Video Terminal Kiosks.

VEHICLE EXCEPTION BASED MANAGEMENT

The VTMS Exception Based Management feature provides a goal setting capability and delivers real-time exception-based information to the user community. Therefore maximizing issue resolution time, increasing options and reducing costs. The exception management rules engine allows users to see exceptions for a vehicle, as well as, for a “process step”. The VTMS “Dashboard” user interface or Windows Mobile Terminal interfaces enables users a “quick snapshot” with “stop lighting” to easily determine issues. The VTMS alerting engine reaches out to actively notify users of critical issues.

