Global Distribution Management System

GDMS: Providing Vehicle In-Transit Visibility, Incident Analysis and Emergency Management Solutions

The Global Distribution Management System, or GDMS, is a map-centric software application that tracks commercial trucking and private security firms in support of U.S. Army logistics operations in deployed environments. GDMS has been operational for over a decade, supporting ground transportation movements throughout Iraq and Afghanistan.

The commercial software provides near real-time In-Transit Visibility (ITV) of transponder-equipped vehicles that transport equipment, fuel, medical supplies and other cargo for the U.S. military. GDMS is used to track incidents, plan routes and provide feedback to the U.S. military on the carriers’ planned movements. It also provides emergency/panic alert warnings to contractor personnel as they pass hazards and checkpoints.

GDMS is a key element of the U.S. military’s Host Nation Trucking (HNT) program and National Afghan Trucking (NAT) registered carriers. GDMS acts as a central data-fusion system and gateway, enabling the U.S. military to have near real-time visibility, tracking metrics and accountability for all registered commercial logistics.

The system features graphical displays of mission data, including vehicle locations on topographical maps.

At the core of GDMS is a centralized database that links cargo movements with vehicle-based transponders. The GPS transponders send signals to commercial satellites, which are relayed to a ground station and forwarded to the military customer.

As an incident analytics tool, GDMS is used by intelligence personnel to analyze attacks on tracked vehicles and includes an instant playback feature allowing for course-of-action analysis.

GDMS is also used to manage transportation movement requests, or TMRs, to capture actual delivery times, correlate actuals to scheduled requirements, validate demurrage charges, finalize shipments and support invoicing. GDMS’ replay function assists with insurance claims, investigations and litigation.

To date, GDMS has successfully managed over 200,000 missions and has demonstrated the capacity to handle over 12,000 missions per month.
Capabilities

PANIC ALERTS
- With a push of a button, drivers inform everyone in the GDMS network that they need immediate assistance. A panic alert message displays on a user’s screen, and then an audible alert signal sounds off. The map on the screen automatically centers on the vehicle in distress.

GEO-FENCING
- Geo-fencing is accomplished by marking user-defined areas on the map. Proximity alerts are sent via pop-up alerts and email notifications when specified vehicles and transporters enter that area.

DATA IMPORT AND EXPORT
- Transfers files, op-views, messages and other information to internal and external locations. Includes exporting data to off-the-shelf software programs (i.e., Microsoft Excel®, PowerPoint®, Access®).
- Tracks resources and establishes automated alerts when critical resources require individual tracking or are below prescribed levels.
- Forecast future mission requirements based on actual information rather than on estimated asset and in-transit data.

CALL-OUTS
- Manually creates tags on the map screen to draw attention to road hazards, adverse weather conditions, driver situation reports or any other noteworthy information. Callouts automatically link to files, pictures or URL addresses with a single click.

GOOGLE EARTH OP-VIEWS
- Users can capture Channel Access Control (CAC) layers, Op-View images, vehicles, and virtually all displayed icons onto Google Earth™ maps. The user exports the current GDMS Op-View in KML format, which creates a Google Earth icon on the desktop. By double-clicking this icon, the same area of the world selected in GDMS with all associated vehicles, CAC layers and Op-View images is displayed.

INSTANT REPLAY
- Allows replay or reconstruction of live events days or weeks after the occurrence. The tracks of any one vehicle or group of vehicles can be replayed for analysis. Users can review alerts (panic/geo-fence).

INCIDENT ANALYSIS
- Historical analysis of enemy contacts and/or transportation network interruptions. All panic alerts can be automatically placed into a historical database for future intelligence analysis.

GDMS provides a Common Operating Picture for ITV of personnel and vehicles.

The software displays a near real-time picture at any given time and place

GDMS has saved the U.S. military millions of dollars