

MOBILE ASSET TRACKING SYSTEMS

It is imperative that personnel, vehicles, and shipments are accounted for during a mission, whether that mission is at home or abroad. Pinpointing asset location is critical, and the accuracy of location fix and the time it takes to establish that fix are crucial in deployment situations. The greater the accuracy of the positioning information the greater potential there is to respond quickly and fulfill the mission successfully.

The mobile asset tracking system from LGS Innovations is an integrated solution offering that includes both software and hardware components. Designed specifically to monitor a wide range of assets located in different environments, the mobile tracking system has the capability to be either wireless- or satellite-based, and provides a robust, reliable solution to address both daily and emergency response situations.

Mobile asset tracking systems from LGS Innovations:

- » Have the capability to be either wireless or satellite-based
- » Monitor a wide range of assets in many different environments
- » Address both daily and emergency response situations

The logo for LGS Innovations features the letters 'LGS' in a large, bold, blue serif font. A light blue, curved swoosh arches over the letters. Below 'LGS', the word 'INNOVATIONS' is written in a smaller, blue, sans-serif font.

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Asset Tracking:

Taking the Strain off Complex Logistics

When facing challenging logistics and asset management requirements in the field, mobile tracking solutions from LGS Innovations provide real-time situational feedback that allows for increased asset awareness. This provides greater insight into shipment status, manpower, and relocation efforts, with up-to-the-minute identification and tracking of location, movement, and condition. Ideal for agencies with complex logistics requirements, the LGS mobile tracking system helps to ensure that critical assets arrive safely and on time at their intended destination.

Automatic reporting of vehicle or personnel location and status through the mobile asset tracking system shows a location history, or “breadcrumbs.” For example, a five-minute breadcrumb for all vehicles on a given assignment will provide adequate location identification on an automatic basis. Flexibility is important in breadcrumb tracking, and must take into account both the cost for the supporting bandwidth that is used for the reporting and the amount of data and status reports provided to the end-user. LGS performs a detailed analysis of vehicle types, vehicle conditions, and vehicle/personnel response requirements in order to determine an appropriate timeline for breadcrumb tracking. Various asset details are analyzed to determine applicability for the overall solution. Asset conditions or features such as the amount of fuel the vehicle contains, speed of a vehicle, a panic button for requesting immediate assistance, texting capability, and high-resolution mapping can be considered as part of the overall solution.

Overall Network Evaluation for Flexible Solutions

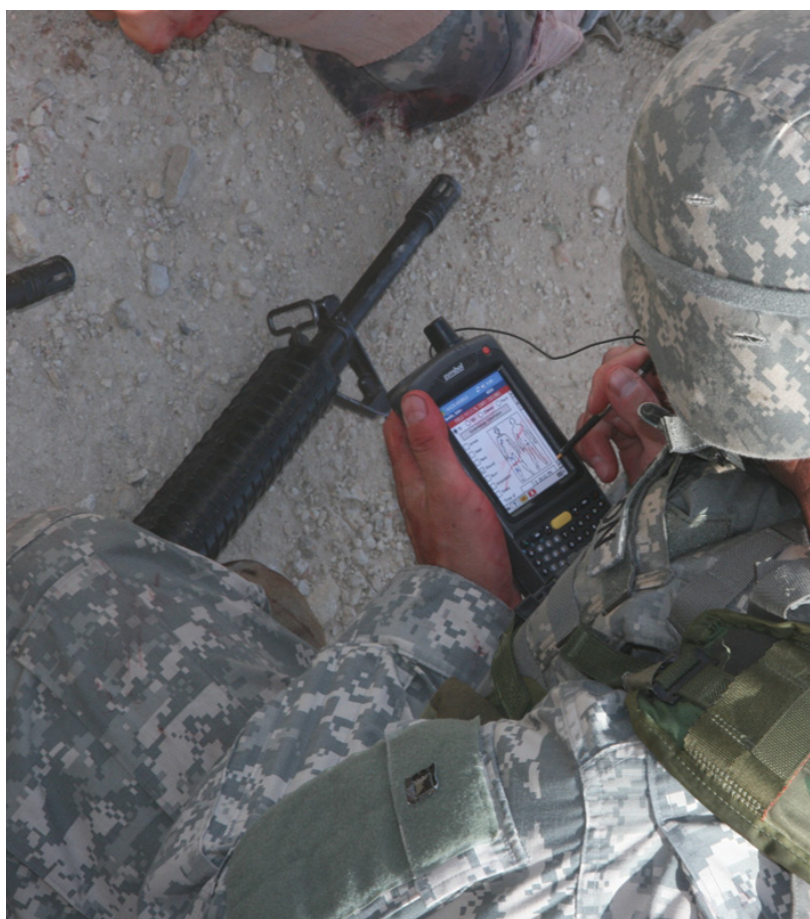
Today’s location technologies have surpassed hardware-centric first generation approaches, providing flexible, cost-sensitive options that offer the functionality to support future data-intensive services. By addressing the availability of existing wireless communications, network security, cost-effectiveness, and ease of operations, LGS Innovations takes into account both the present and future needs of the overall network in order to allow for both growth and efficient use of bandwidth. Existing network technologies are investigated for affordability as

well as for any new network topologies that would be required. Breadcrumb information from an asset is short textual data sent from the asset to the control center, and satellite networks are typically used for this requirement, especially in remote locations that do not have an existing network infrastructure. If a wireless network is already in place, this short burst of data can be sent over the existing network.

In order to increase cost savings, LGS Innovations presents options that allow for a robust asset tracking system while still assuring optimum functionality.

Hosted Environment Deployment

A hosted environment places the servers and operating software for the mobile tracker application in a secure server compound within the United States. A hosted environment is not only lower in cost, but also provides several key security elements, mitigates export restrictions, provides flexibility and security, and is easier to maintain.



This configuration provides:

- » Security – Placing the software and servers within a secure compound removes the risk of identifying asset locations or the software being attacked.
- » Mitigation of Export Restrictions – Since software would remain in the U.S. there are no issues regarding export.
- » Lower Cost – Systems do not need to be purchased, installed, or maintained OCONUS.
- » Ease of Maintenance – Software maintenance can be managed, controlled, and performed by certified technicians.

With a hosted environment, communications are performed within a private network with no access to the public network. This provides security against infiltration from outside sources. All access to the secure software is password controlled.

Commercial Off-the-Shelf (COTS) Solutions

A COTS system minimizes costs, reduces efforts in developing custom designs, and satisfies export constraints. With the capability to utilize widely-recognized applications such as Google maps, LGS' mobile tracking system stays in-line with the project budget while still bringing robust tools to the table. The hardware element for a vehicle is small and compact, and can easily be placed under the vehicle's dashboard and installed within 30 minutes. The hardware element for personnel is lightweight and can easily be placed within a backpack.

Mass Communications

The LGS mobile tracking system allows the asset user to use a texting capability to send a message to the control center, and allows the control center to easily send out a pre-determined message to an individual asset, group of assets, or all assets. A panic button and sensor unit can also be provided for all vehicle assets, allowing a variety of conditions to be reported quickly and easily. Status reporting such as driver door open, cargo door open, ignition on, idle status, engine status, fuel status, engine maintenance status, and historical location tracking also allow a more detailed view into the status of the asset.



Proven Communications Integration

Our team is highly skilled in service areas related to design and deployment of voice, video, data, and wireless solutions, and have successfully implemented many communications projects and systems both within the United States and throughout the world, including work for the U.S. Army, in-country governments, and coalition forces in Southwest Asia in Iraq, Kuwait, and Afghanistan.

LGS utilizes strategic partnerships amongst equipment suppliers and in-country resources to provide a full turn-key solution, supplying all equipment and services for the mobile tracking system.

This solution includes:

- » Procurement of all asset tracking equipment
- » Procurement and establishment of a hosted mobile tracking server/software environment
- » All installation services
- » Project management services
- » Shipping and logistics for all equipment
- » Coordination for all bandwidth subscriptions
- » Establishment of an in-country spares depot
- » In-country training
- » Ongoing in-country Tier 1 operations and maintenance
- » Establishment of Tier 2 operations and maintenance
- » Establishment, equipment installation, and integration for an in-country operations center
- » LAN installation for the operations center

ABOUT LGS INNOVATIONS

LGS Innovations delivers mission-critical communications products, R&D, and supporting services to U.S. defense, intelligence, and civilian agencies, state and local governments, critical infrastructure operators, and commercial customers around the world. We create advanced solutions in wireless communications, signals processing and analysis, optical networking, photonics, routing and switching, and spectrum management.

These solutions drive mission success in Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR), cyberspace operations, and network assurance. By incorporating best-in-class commercial and custom technologies with a full suite of offerings in research and development, engineering, integration, and product applications, our solutions improve efficiency, reduce costs, and provide an information advantage to our customers.

LGS has a history and culture of innovation, and maintains strong ties to our Bell Labs legacy of inventive development. Our intellectual curiosity keeps us on the cutting edge of technology and leverages our 75-year history of creating next-generation communications solutions to support critical operations.

LGS Innovations is a U.S.-owned company headquartered in Herndon, Virginia, with offices across the U.S. and overseas. We employ more than 1,000 associates around the world, including 750 scientists and engineers. Do you have a passion for innovation? So do we. Learn more at www.lgsinnovations.com.



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