

CASE STUDY _

LMI Supports Logistics Decision Advantage for USTRANSCOM's Turbo Fusion Exercise

MISSION OPERATIONS & LOGISTICS

Key Highlights

- During the Turbo Fusion Exercise, USTRANSCOM leveraged LMI's capabilities to test, validate, and optimize near real-time logistics tracking capabilities.
- We tagged 400+ pieces of cargo with SPECTR™ mesh tags, enabling secure, near real-time monitoring across staging yards, in transit while in CONUS, and downrange at overseas mission locations. The data was viewable in multiple DoW analytics platforms for stakeholders to evaluate the ability of SPECTR to enable strategic logistics decisions.
- SPECTR delivered near real-time ITV and AV, ensuring precise cargo tracking without reliance on fixed infrastructure, demonstrating the potential for significant cost and time savings to establish visibility.

Navigating logistical complexity in modern warfare

The United States Transportation Command (USTRANSCOM) plays a vital role in logistical operations for the Department of War (DoW), ensuring the rapid deployment of personnel and assets, anytime, anywhere. Turbo Fusion, a large-scale exercise conducted from late 2025 to early 2026, provided USTRANSCOM with the opportunity to test its ability to mobilize and manage critical military assets, ranging from equipment and vehicles to sustainment cargo in realistic deployment conditions.

In future conflicts, the ability to securely track, redirect, and reallocate vital equipment and supplies will be essential to mission success.

Current fielded RFID tracking systems lack visibility between nodes and have other inherent limitations on effectiveness.

Without effective in-transit visibility (ITV), strategic operations could fail to meet critical timelines, putting lives and operations at risk. USTRANSCOM needs a resilient, scalable solution that can provide precise ITV and asset visibility (AV) without relying on fixed infrastructure during dynamic logistics scenarios.

Innovative technology for seamless asset tracking

During the exercise, LMI deployed SPECTR™, a scalable RFID platform that provides cost-effective ITV and AV for critical equipment and cargo, to showcase near real-time, secure data delivery without reliance on fixed infrastructure in unpredictable and challenging environments.

LMI equipped over 400 pieces of cargo with SPECTR tags at multiple CONUS staging locations. These tags provided precise cargo tracking as it traveled from its home location, through DoW distribution channels, and into the theater of operations. The system uses a variety of devices to gather and transmit data from hundreds of tags with minimal infrastructure requirements, demonstrating enhanced tracking capabilities, compared to traditional active and passive RFID-based solutions.

SPECTR's data was viewable in both the U.S. Navy and DoW-wide tools, ensuring commanders had instant access to geographic maps for monitoring cargo locations. By employing tags with long battery life and DoW-compliant encryption, LMI provided reliable and persistent visibility while maintaining operational security.

Key SPECTR Features

- **Wireless Tags**
Battery-powered tags capable of securely transmitting location, environmental, and sensor data.
- **Mesh Gateways**
Devices capable of capturing and transmitting information on-the-move for multiple tags via secure DoW networks.
- **Persistence and Scalability**
Tags offer long battery life and work across large areas, regardless of fixed infrastructure.
- **Dual Capabilities**
Supports both AV in fixed environments and staging areas, and ITV while enroute to deployment locations.
- **Flexible Data Collection**
Data collected in SPECTR is viewable via multiple methods for advanced analytics integration.

Transforming Logistics Decision-Making

The Turbo Fusion exercise validated SPECTR's ability to address DoW's logistics challenges in real-world conditions and support multiple layers of mission-critical planning. SPECTR's ability to provide dual-use AV and ITV capabilities ensures that equipment and supplies are tracked and deployed with precision, offering warfighters a decisive advantage in maintaining supply chain integrity and operational readiness.

Key Outcomes:

- **Near Real-Time Visibility:** Achieved near real-time asset visibility at critical points—storage/staging yards, while in transit, and to mission deployments overseas.
- **Cost Savings:** Reduced cost of ITV and AV infrastructure compared to traditional RFID alternatives.
- **Increased Security:** Wireless radio frequency communications encrypted to DoW standards provided secure reporting and minimizes the risk of disruption.
- **Unified Logistics Solution:** Demonstrated the viability of a single technology solution for end-to-end visibility, eliminating data silos between AV and ITV.

Following the success of Turbo Fusion, LMI anticipates deploying SPECTR across additional DoW commands and units to demonstrate scalability and resiliency of our solution. Enhancements to SPECTR's global tracking and integration with enterprise-wide platforms will augment ongoing mission readiness, ensuring persistent visibility and decision-making advantages in contested logistics environments.

For more information

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