

## Goals and Benefits

- Leverage current aRFID investment to the maximum extent.
- Leverages existing backhaul communications capabilities as part of the mesh network to effectively connect distribution nodes with conveyances, in process, in route, and in storage from “factory to fox-hole.”
- Improve life cycle management and asset visibility by combining GPS with sensor technologies.
- Improve overall readiness by increasing visibility and allowing proactive tools to help ensure the serviceability of assets and mitigate the occurrence of those assets that have been compromised due to exposure to unacceptable environments.



## Stakeholders



## Points of Contact

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# Next Generation Wireless Communications (NGWC) For Logistics Applications

*Next Generation Wireless Communications For Logistics Applications is an effort to improve in-transit visibility and enable total asset visibility.*



**US Army  
LOGISTICS  
INNOVATION  
AGENCY**

## Mesh Network Tracking

Next Generation Wireless Communications (NGWC) for Logistics Applications is a development effort aimed at improving in-transit visibility and enabling total asset visibility. This effort will demonstrate global, near-real-time asset visibility across the DoD logistics enterprise.

NGWC harnesses adhoc mesh networking technology resulting in a secure wireless mesh network protocol where “mesh points” form a communications network among themselves collecting and routing data to various NIPR-based AIS providing enhance situational awareness to the warfighter.

### Characteristics

- Mobile
- Adhoc (self-forming / self-healing)
- Fully encrypted
- Data Agnostic. . . “Multi-Tasking AIT”
- Ultra-low power consumption



NGWC Gateway at Enclave

## “SMART” Technology and Features

- IEEE 802.15.4 wireless protocol
- GPS and sensor enabled
- Bi-Directional Data Flows (Manifest/Content detail will be written over the mesh, allows tags to be permanently installed)
- HERO certification (planned for FY11—Dahlgren)
- Mesh protocol designed/optimized to support DoD logistics processes
- Designed to meet DoD logistics processes
- Designed to meet DoD Information Assurance requirements to include data encryption at rest and in motion
- Leverages existing backhaul communications capabilities throughout the pipeline
- Battery-powered (ultra-low power)



## Business Case Uses

- In-Transit Visibility (ITV)
- Yard/Asset Management
- Sense and Respond Logistics
- Condition Based Maintenance (CBM+)
- Non-Logistics Applications

