

# Radio Frequency Identification Technology in the Department of Defense Supply Chain — Now and Future



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Supply Chain Integration

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## It's not about RFID . . .

- It's not about RFID.
- It's not about technology.
- It's not about computers.
- It's not about data.
- It's about actionable information, delivered in real-time, enabling capabilities that have never existed before.
- It's about knowledge-enabled, precision-guided logistics.

"The future is here.  
It just isn't widely  
distributed yet."

— William Gibson

***Technology hurdles  
are not  
insurmountable.***



# DoD Logistics Is Big Business

- Defense spending on RFID is expected to double from \$115 million today to \$230 million by 2010.
- Total Federal RFID spending (including DoD) is expected to reach \$560 million by 2010.



## DoD Operational Resources

- 51,000 vendors
- 2000+ legacy logistics systems
- 45,000+ requisitions per day
- \$80 billion inventory

## \$700 billion in assets:

- 300 ships
- 15,000 aircraft
- 30,000 combat vehicles
- 900 strategic missiles
- 330,000 ground vehicles

**It's a complex enterprise, and delivering cost-effective operational availability is a central challenge.**



# The 2006 Quadrennial Defense Review Report

- Active and passive RFID technologies will play a key role in achieving the Department's vision for implementing knowledge-enabled logistics support to the Warfighter through automated asset visibility and management.
- RFID is designed to enable the sharing, integration, and synchronizing of data from the strategic to the tactical level, informing every node in the supply chain network.
- This information should provide greater insight into the cause-and-effect relationship between resources and readiness.



**The Department of Defense is fully committed to RFID as a key tool for the force.**



# RFID Policy Scope & Standards

## Active RFID — freight containers, air pallets, large engine containers

- 433-Mhz readers & tags
- DoD tag data formats
- Suppliers rarely obligated to apply tags
- No wide-scale commercial use – today

## Passive RFID — case & pallet (all items), item packaging (UID items)

- EPCglobal Generation (Gen) 2 is preferred standard for DoD & industry
  - Migration to EPC Gen 2 std ongoing
  - EPC Class 0 & 1 std tags accepted until “sunset” date
- Use EPC tag data formats (includes DoD tag data construct)
- Suppliers contractually obligated to tag
- Wide-scale commercial implementations





# Global Standards Key to Success

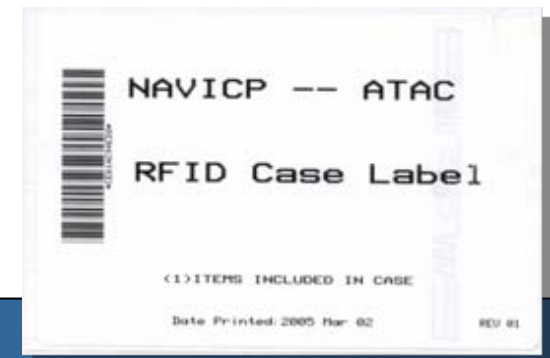
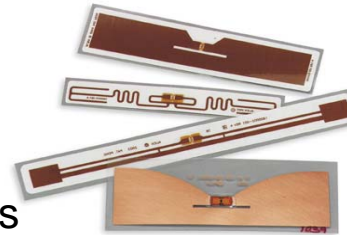


- **DoD adopted EPCglobal standards for passive RFID**
  - Leverages the marketplace
  - Government and Commercial sectors on same standard
- **Consistent standard anywhere the Department operates in the world**
- **Consistent standard with all suppliers**
- **Drive for consistent standards and interoperability with Allies**



# Passive RFID: Promising Early Implementations

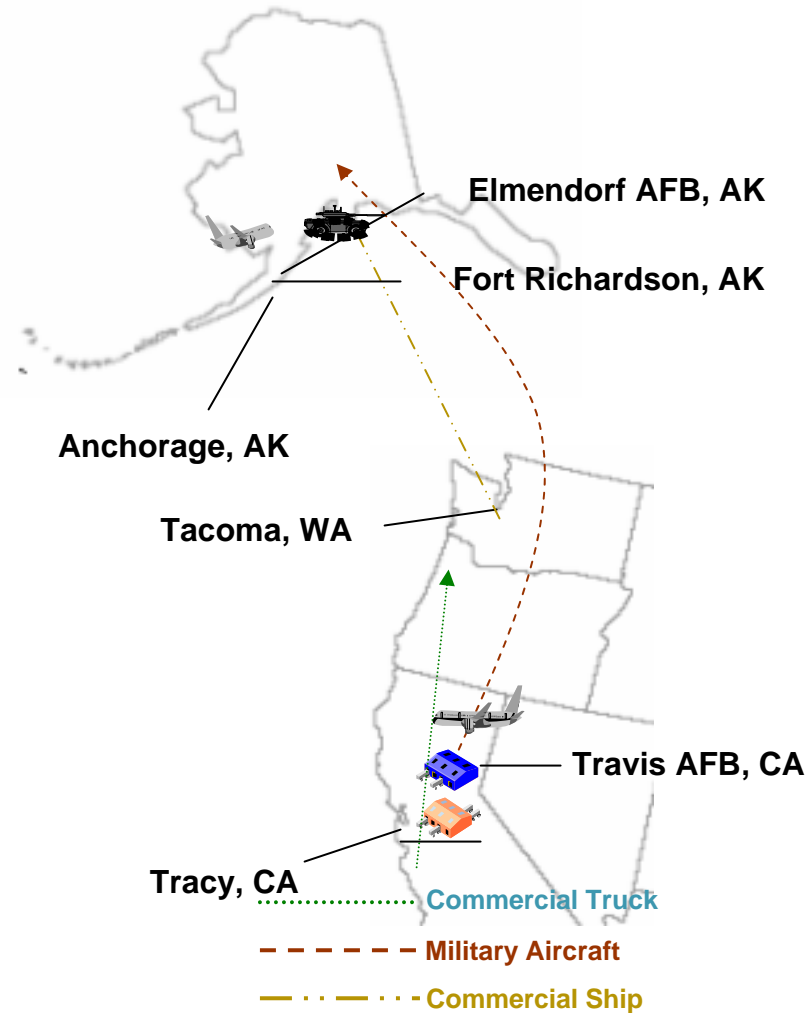
- **Norfolk Ocean Terminal (full implementation)**
  - Accuracy – e.g., Misrouted Shipments (3% improvement)
  - Time Savings (39% improvement)
- **USS Nassau (small-scale test)**
  - Passive RFID in receiving/sorting process provides significant productivity gains
- **Advance Traceability & Control Transportation System (ATAC) (Ongoing)**
  - Automated receipt information collected via passive RFID identified 355 shipments worth \$12.6M where no proof of delivery information was previously recorded in the depot logistics system.
- **TRIDENT Refit Facility, Bangor**
  - Significant Storeroom Efficiencies
  - Single process for all receipts (SAP)
  - Exportable to other systems





# DoD Alaska RFID Project

- Cross-Service (Air Force, Navy, Army, Defense Logistics Agency [DLA], TRANSCOM, etc.) implementation of passive RFID technology in the end-to-end supply chain
- Implementation Approach
  - Reengineer business processes.
  - Automate reengineered processes with passive RFID technology.
  - Train workforce to execute RFID-enabled reengineered processes.
  - Expand to additional nodes and levels of tagging.



DoD's Premier Implementation





# Benefits Based on Experience

## ➤ RFID for last tactical mile

- II MEF tagging materiel for operating units
- Associating tags with SATCOM on trucks

## ➤ Real-time asset visibility

## ➤ Real cost avoidance:

- Reduced inventory in Iraq from \$127M to \$70M
- Reduced wait time from 28 to 16 days
- Increased fill rate from 77% to 89%
- Reduced retail backlog from 92,000 to 11,000 orders



**Increase confidence in the supply chain.**



**“The Department of Defense Supply Chain  
is a strategic weapon.”**

**The Honorable Ken Krieg, USD(ATL)  
House Committee On Armed Services, April 5, 2006**