“…Radio Frequency Identification (RFID) will play a key role in achieving the Department’s vision for implementing knowledge-enabled logistics support to the warfighter…”

Quadrennial Defense Review Report, February 6, 2006
The RFID Vision

Implement knowledge-enabled logistics through fully automated visibility and management of assets in support of the warfighter

Make the Supply Chain an Offensive Weapon
However we are still facing old challenges...
End-to-End RFID enabled DoD supply chain

- Manufacturers/Suppliers
- Distribution Centers/Depots
- SPOE/SPOD/APOE/APOD
- Transportation/Supply/Theater Depots/TDCs
- Customers

Work with DoD Suppliers

Work with DoD Services/Agencies
RFID will enable distribution centers, customer sites, etc.
Goal: An Integrated Supply Chain

Integrated Data /Asset Visibility

Communication Link

Origin

Cross Dock
SPOE/SPOD/APOE/APOD

Destination

Benefits
- Accurate and timely data capture
- Labor savings

Benefits
- Improve in-transit visibility
- Improve destination load planning

Benefits
- Reduce shrinkage
- Automated ID of misrouted material
- Improve visibility

Benefits
- Improve in-transit visibility
- Improve destination load planning

Benefits
- Improve confidence in supply system
- Automatic receipt
- Improve visibility
Active RFID – In-transit visibility of consolidated shipments
- 433 Mhz readers & tags
- DoD tag data formats
- Suppliers rarely obligated to apply tags
- No wide scale commercial use

Passive RFID – Visibility and Automated Processing at box and pallet level
- EPCglobal Class 0 and Class 1 (both Gen 1 and Gen 2) readers & tags
- EPC tag data formats (includes DoD tag data construct)
- Suppliers contractually obligated to tag
- Wide scale commercial implementations
2005 Accomplishments
- Initial DFARS clause effective Nov 14, 2005
- Two key depots are operational
- RFID data requirements have been incorporated into Wide Area Workflow (WAWF)
- RFID tagged shipments are being processed

2006 Plans
- Synchronize Component Plans and ensure Component funding
- Instrument 16 CONUS distribution centers
- Implement 3 AMC aerial ports
- Implement initial RFID related data architecture
- Issue 2006 DFARS (additional commodities/sites)
DFAR 2005: Final clause effective November 14, 2005

- Class II – Clothing and Textiles
- Class VI – Personal Demand Items
- Class IX – Weapon System Spare and Repair Parts
- Class I (subclass for Prepackaged Operational Rations/MREs)
- …Shipped to Susquehanna and San Joaquin

DFAR for 2006 adds additional commodities/locations:

- Class III – Packaged Petroleum
- Class IV – Construction/Barrier Equipment
- Class VIII – Medical Material (not Pharmaceuticals, Biologicals, or Reagents)
- …Shipped to all US distribution centers, three strategic aerial ports

DFAR for 2007 – Analysis underway

Acceptable tags…Class 1 (Gen 2)
DLA Defense Distribution Depots
- Albany, GA
- Anniston, AL
- Barstow, CA
- Cherry Point, NC
- Columbus, OH
- Corpus Christi, TX
- Ogden, UT
- Jacksonville, FL
- Oklahoma, OK
- Norfolk, VA
- Puget Sound, WA
- Red River, TX
- Richmond, VA
- San Diego, CA
- Susquehanna, PA
- San Joaquin, CA
- Tobyhanna, PA
- Warner Robbins, GA

TRANSCOM Air Mobility Command Terminals
- Charleston, SC
- Norfolk, VA
- Fairfield, CA (Travis AFB)
Implementation Plan: Level of Packaging

- Palletized Unit Load Tag
  - YES – 2005

- Exterior Container
  - YES – 2005

- UID Item Unit Pack*
  - No – 2005-2006

- Shipping Container
  - YES – 2005

*If the UID Packaging is also an External Container or a Shipping Container, it will have an RFID tag.
Advance Shipment Notice Requirement

Manufacturers/ Suppliers

ASN

UDF/FTP EDI 856 Web Page

Tagged Material

DoD Facility

ASN

DoD Enterprise Capabilities

GEX

DoD Router

Store RFID Data

Transactions with RFID and UID data

Database

DoD Logistics AIS

RFID Middleware

Current Capability

Proposed Capability

Tagged Material

DoD Facility

ASN

UDF/FTP EDI 856 Web Page

Manufacturers/ Suppliers

ASN

DoD Enterprise Capabilities

GEX

DoD Router

Store RFID Data

Transactions with RFID and UID data

Database

DoD Logistics AIS

RFID Middleware

Current Capability

Proposed Capability
Beginning to Build the Passive RFID Network

- Ft. Richardson
- Elmendorf AFB
- Tacoma, WA
- Bangor, WA
- Travis AFB
- DDJC
- DDSP
- Norfolk, VA

2005 Implementations

2006 implementations

- Commercial Truck
- Military Aircraft
- Commercial ship
Passive RFID Roll-out in 2006

- 2005 Implementations
- 2006 Implementation
- Additional 2006 Implementations
RFID-enabled Internal Processes

Manufacturers/Suppliers → Distribution Centers/Depots → SPOE/SPOD/APOE/APOD → Transportation/Supply/Theater Depots/TDCs → Customers

- Loose Picks
- Staging
- Case Pick
- Shelf Inventory
Early Implementations are Promising

- **Norfolk Ocean Terminal**
  - Accuracy – i.e. Misrouted Shipments (3% improvement)
  - Time Savings (39% improvement)

- **USS Nassau**
  - Indicated that using passive RFID in their receiving/sorting process will result in efficiencies.

- **Advance Traceability & Control Transportation System (ATAC)**
  - 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.
Outfitted Defense Distribution Center San Joquain, CA (DDJC) and Defense Distribution Center Susquehanna, PA (DDSP) with passive RFID infrastructure (2005)

Have begun process for instrumenting remaining CONUS DLA distribution centers & TRANSOCM aerial ports (2006)
PTAC Training

- Established a formal agreement with the Procurement Technical Assistance Centers (PTAC) to provide RFID training/outreach to the DoD supplier community.

- Conducted 14 “Train-the-Trainer” workshops
  - 300 counselors trained on DoD RFID Policy
  - 94 PTAC Centers in US for local outreach to small businesses

- PTACs are developing and delivering RFID assistance to DoD suppliers via a variety of methods
  - 25 Local workshops occurred in Fall 2005
  - 1400 attendees to participate
  - http://www.dla.mil/db/
The Way Ahead

- Publish the 2006 DFARS rule for passive RFID
- Work with the Services and Agencies on the DoD internal rollout for passive RFID
- Continue to provide education and outreach
For further information that can assist you with compliance, visit: http://www.dodrfid.org

- DoD RFID Policy
- DoD RFID Supplier Implementation Plan
- DoD Suppliers’ Passive RFID Information Guide
- MIL-STD 129P(3) (Updated with RFID changes)
- Wide Area Workflow (WAWF) Information
- Frequently Asked Questions (FAQ)
- Class of Supply Lookup
- Lessons Learned
- Schedule of RFID Events where DoD RFID personnel will be speaking

You can ask the team any RFID-related question through the following email address: info@dodrfid.org