Automatic Information Technology (AIT) & In-Transit Visibility (ITV) 101
“USTRANSCOM Provides Full-Spectrum Global Mobility Solutions & Related Enabling Capabilities for Supported Customers’ Requirements in Peace and War.”
Although logistics does not possess the drama of battle, it does underlay strategy and determine victory or defeat.

After all, the relative combat power that military forces can bring to bear against an enemy is enabled by a nation’s capability to plan for, gain access to, and deliver forces and materiel to the required points of application across the range of military operations.
Automatic Identification Technology (AIT):
A suite of technologies enabling the automatic capture of data, thereby enhancing the ability to identify, track, document, and control assets (e.g. materiel), deploying and redeploying forces, equipment, personnel, and sustainment cargo.

AIT encompasses a variety of data storage or carrier technologies, such as linear bar codes, two-dimensional symbols...satellite tracking transponders, and radio frequency identification tags that are used for marking or "tagging" individual items, equipment, 463L pallets, or containers. (Source: JP 4.09 Distribution Operations)
In-Transit Visibility (ITV):
The ability to track the identity, status, and location of DoD unit and non unit cargo (excluding bulk petroleum, oils, and lubricants) and passengers, patients, and personal property from origin to destination across the full range of military operations.
(Source: JP 1.02 DoD Dictionary of Military and Associated Terms)

ITV scenario:
Medical helicopter traveling via C-17 aircraft from Travis AFB, California to Cameroon, Africa with stopping points at Dover AFB, Delaware and Ramstein AB, Germany.
World's largest Active RFID network

Reporting to the RF-ITV Server

• 1,790+ Read (R) and Write (W) sites
• 550+ Satellite-Base Tracking Systems reporting to the RF-ITV Tracking Portal
• 42 countries, 16,000+ registered users

1 Week Activity
Tags Written: 3,712
Tags Read: 54,347

Australia
1R / 0W Sites

United Kingdom
38R / 4W Sites

AFRICOM
4R / 0W Sites

EUCOM
170R / 118W Sites

CENTCOM
141R / 206W Sites

PACOM
170R / 102W Sites

NORTHCOM
465R / 409W Sites

SOUTHCOM
6R / 0W Sites

UNITED KINGDOM
38R / 4W Sites

AFRICOM
4R / 0W Sites

EUCOM
170R / 118W Sites

CENTCOM
141R / 206W Sites

PACOM
170R / 102W Sites

NORTHCOM
465R / 409W Sites

SOUTHCOM
6R / 0W Sites

NATO
10R*
*exercise support

1 Week Activity
Tags Written: 3,712
Tags Read: 54,347
In-Transit Visibility For Whom?

Strategic
- Macro Metrics
- Direct Vision

Operational
- Flow/velocity
- Scheduling
- Mission

Tactical
- Content
- Location
- On-time delivery

ITV data is used at all levels

“Open a second port to increase throughput.”

“Re-direct that shipment!”

“Where’s my stuff?”
TOGETHER, WE DELIVER.
DEPARTMENT OF DEFENSE

Strategy for Improving DoD Asset Visibility

Third Edition – August 2017

Assistant Secretary of Defense for Logistics and Materiel Readiness

- DoD Stakeholders – OSD, Joint Staff/J4 (CCMDs), Services, USTRANSCOM, DLA
- Guides and integrates DoD-wide efforts to improve asset visibility, reduce supply chain risk, and improve decision making strategy
- Provides framework to coordinate and integrate efforts to improve end-to-end supply chain asset visibility
- Builds on existing infrastructure, current business process, and system requirements
- Establishes Asset Visibility (AV) and Item Unique Identification (IUID) Working Groups to work collaboratively to identify and share visibility capabilities and opportunities
- Supporting Execution Plans (SEP) for addressing process, data, and technical improvements to improve asset visibility
- 3rd Edition was published in August 2017
Automatic Identification Technology (AIT) for Department of Defense (DoD) Supply and Transportation Processes

26 September 2014

- Signed by Commander USTRANSCOM
- Foundation document, focuses on current AIT media employed throughout the supply and transportation pipeline
- Active and passive RFID tags, barcodes, and satellite transponders are the backbone of the DoD AIT toolbox
**AIT VISION:** Enhance asset visibility to maximize deployment and distribution operational efficiencies through the use of Automatic Identification Technology (AIT)

**Types of AIT**
- Bar Codes
- Radio Frequency Identification (RFID) – Active and Passive
- Satellite tags

**AIT enables ITV**
- Ensures timely location updates
- Significantly reduces the possibility of human error
- Provides capability to efficiently track, document, and control the deployment of personnel and materiel
A family of commercial technologies providing a range of capabilities.
Layers of Consolidation for Shipments

Layer 0 – Individual Item
- 2D Matrix Bar Code

Layer 1 – Package
- Passive RFID Bar Code

Layer 2 – Transport Unit (cartons, boxes)
- Passive RFID Bar Code

Layer 3 – Unit Load (warehouse pallet)
- Passive RFID Bar Code

Layer 4 – Freight Container (SEAVAN containers, 463L air pallets)
- Active RFID License Plate Bar Code

Layer 5 – Movement Vehicle (truck, aircraft, ship, train)

Future Baseline AIT
- Primary
- Back Up

“Premium” AIT: Data-Rich Active RFID, Satellite/Cellular, & Sensor...

...Applied for: Safety, Security, Perishables, Location, and/or Content Detail
ITV Components

• ITV is achieved through Automatic Information Systems (AIS)

• There are only **TWO** recognized ITV systems
  • IGC
  • RF-ITV Tracking Portal (Radio Frequency In-Transit Visibility)
  • **IGC is DoD’s authoritative source for ITV**

• Business Process Systems
Data Input/Capture + AIS + Trained User = ITV
**Automatic Identification Technology and In-Transit Visibility puts the Trust into the Supply Chain**
Automatic Identification Technology (AIT) as an ITV Enabler