Item Unique Identification (IUID) Basics

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Scope

• What is Item Unique Identification?
• Why is IUID Important the Army and DOD?
• Which Items Require IUID?
• Looking to the Future
• PD AMIS Resources to Assist You
IUID / UII Definitions

• **Item Unique Identification (IUID)** means a system of marking items delivered to the DOD with unique item identifiers that have machine-readable data elements to distinguish an item from all other like and unlike items. “IUID” generally refers to the program, rather than the data.

• **Unique Item Identifier (UII)** means a set of data marked on items that is globally-unique, unambiguous, and robust enough to ensure data information quality throughout life and to support multi-faceted business applications and users

**UII is Like a Social Security Number - for Things**
Item Unique Identification (IUID)

1. Assign an item a globally-unique identification number.

2. Register that number and supporting pedigree information in a central database.

3. Apply a permanent machine-readable mark to the item, containing that Unique Item Identifier (UII).

4. Use that globally-unique identification number for lifecycle management of the item.

5. DOD and Army transition to use of IUID involves:
   - The marking of millions of items meeting IUID criteria that are already in the inventory.
   - Automated systems enabled to use the UII.

IUID = Item Unique Identification
UII = Unique Item Identifier
DOD = Department of Defense
CAG = Commercial Activity / Government Entity
IGCE = Independent Government Cost Estimate
Item Unique Identification is a simple, easily understandable, common sense concept.
What is Encoded in the Data Matrix?

- Data from which the unique item identifier (UII) is derived
- In most cases, the data matrix does not contain all of the data found in the derived UII
- There are over 50 different ways to encode a UII in the data matrix
- To extract a UII from the data matrix requires software that converts the data read by the imager into the UII. This software can be resident in either the imager or in a computer to which the imager passes what it reads.
- The UII is almost never marked on the item in human readable form
Serial Number (SN) vs. UII

SN is **Not** Globally Unique

UII **Is** Globally Unique

SN 00002345

Ull – Unique Item Identifier
Serial Number (SN) vs. UII (Cont.)

SN 00002345

UII = D12374HW76-2100002345
UII = D44L2300002345
UII = D7932800002345
UII = D9VW0100002345
UII = D88102443270002345
UII = D68D2200002345

SN is Not Globally Unique

UII Is Globally Unique

UII – Unique Item Identifier
Transitioning to IUID - a Simple Concept

1005678

SERIALLY MANAGED
BECOMES IN EFFECT
UNIQUELY MANAGED
D192071005678

MANUAL DATA ENTRY
BECOMES
AUTOMATED DATA ENTRY
Changes When Dealing With Uniquely Identified vs. Serialized Items

• Unique Item Identifier (UII) is
  – Derived from data encoded in a data matrix mark that requires an imager to read and software to do the derivation process
  – Not marked on the item in human readable
  – Associated with the item in maintenance, property accountability and other databases – a single data element that uniquely identifies

• The need to use an imager to capture the UII ensures data integrity
  – After upload, data is to be shared among systems by being passed electronically (NOT by keyboard entry)
Importance of IUID

Why is IUID important to the Army and DOD?

\[
\text{UII} = \text{DATA}
\]

which will enable reliable unique item level traceability across all DOD business systems
A single data element that will identify the item
IUID- Essential to **Materiel Readiness**

**Functions supported by IUID**

- Financial Management
- Warranty Management
- Tracking Item Performance & Age
- Failure Analysis
- Reliability Improvement
- Engineering Design Analysis
- Maintenance Productivity
- Supply Productivity
- Safety
- Accountability
- READINESS!

**Capabilities**

- Automated Data Collection
- Machine Readable Marking

**Requirements**

- Value
- Processes
- Analysis
- Information Systems
- Supply Chain Events
- Uniquely Identified Items

**Objectives**

- Strategic Serialized Asset Management
- Item Unique Identification (IUID)
- Unique Item Identifier (UII)

**Speed and Precision in Data Capture**

- Value
- Processes
- Analysis
- Information Systems
- Supply Chain Events
- Uniquely Identified Items

**Machine Readable Marking**
Automatic Identification Technology (AIT) is Key to IUID **Data Integrity**

D123455513HGR13136574867635009

**Ull can contain up to 50 characters**

Goal – **Eliminate** key entry of data!

Each uniquely identified item must bear a data matrix symbol containing the data from which its Unique Item Identifier (UII) is derived.

Imager Enables Error-Free Data Transfer!

**Today -**

**Tomorrow - ?**
Elements of an IUID-enabled Solution

- **UII** – Unique Item Identifier
- **UII-Enabled Maintenance Management**
- **AIT** – Automatic Identification Technology
- **AIS** – Automated Information System
- **IUID** – Item Unique Identification
- **CL** – Supply Class
- **GCSS-A** – Global Combat Support System - Army

**Diagram:**
- **UII-Enabled Maintenance Management**
- **UII** - Marked Property
- **Maintenance Management AIS Accommodating UII and AIT**
- **Automatic Identification Technology (Readers)**
- **CL VII**
- **CL II & IX**
- **GCSS-A**

**Legends:**
- **GCSS-A**
- **CL** - Supply Class
- **GCSS-A** – Global Combat Support System - Army
Items Requiring IUID

• Which Items require IUID?
  – NOTE: OSD is in the process of revising the IUID requirement and has projected release of the revised guidance around 3Q FY15. The DOD Guide to Uniquely Identifying Items, Version 3.0, 2 December 2014 will likely be changed following the release of the new OSD guidance.
  – Any item that is serialized should be looked at as a prime candidate for IUID. “The UII will functionally replace the serial number (items will continue to have serial numbers).”
  – IUID criteria applies to all tangible personal property, regardless of whether it has an NSN
  – Eventually the Federal Logistics Information System (FLIS) and WebFLIS will populate an “IUID Indicator” identifying whether each NSN requires IUID (Y/N). Today, the WebFLIS IUID Indicator is unreliable.
  – Unit level personnel not authorized to IUID-mark items without authorization and direction from higher HQ.
Looking to the Future

• Expect

  – Changes in the criteria that mandate IUID for an item
  
  – As the Army Executive Agent for legacy item marking, AMC will continue executing an enterprise-oriented Army IUID legacy marking program for Class II, and VII in FY12-15; the program will apply additive IUID marks to identified unmarked class II and VII legacy items requiring IUID
  
  – Army G-4 will remain responsible to ensure that legacy items meeting mandatory IUID criteria in other classes of supply and in Class II, and VII that are not marked by the AMC program are marked and registered and that the industrial base replaces any additive IUID marks with IUID marks embedded in equipment data plates/labels when the equipment undergoes depot-level maintenance
  
  – ASA (ALT) and the PM community will be responsible to ensure that newly acquired items requiring IUID are marked prior to acceptance by the government and registered via WAWF.
  
  – Army to specify catalog codes to be used to ID items requiring IUID.

AMC – Army Materiel Command
ASA(ALT) – Assistant Secretary of the Army, Acquisition Logistics and Technology
IMMC – Integrated Materiel Management Center
Where Can You Get Help?

• AR 70-1
  
  – 6–15. Item unique identification
    
    • b. The PMs will—
      
      • “(8) Use the PM, J–AIT” (now PD AMIS) “as a source for AIT products and technical expertise”

• PD AMIS website:  

• PD AMIS IUID POC:  
  
  – Email: usarmy.belvoir.peo-eis.list.pd-amis-iuid@mail.mil
  
  – (703) 545-2984 or DSN 865-2984

When it comes to most aspects of IUID implementation, we’ve been there and done that, or know people who have.