Item-Unique Identification Implementation Template for DoD Maintenance Depots

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Supporting OADUSD (MR&MP)

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Implementation: Translating Policy into Action

USD(AT&L) Policy Memo
29 July, 2003

- New tangible items
  - Begin NLT 1 Jan 2004
  - commercial purchases
  - Begin NLT 1 Jan 2005
  - depot manufactured items

USD(AT&L) Policy Memo
23 December, 2004

- Legacy items in inventory
  - IOC Jul 2005
  - pilot depots
  - Complete NLT Sep 2007
  - all existing serialized items
  - Complete all items NLT Dec 2010
Legacy UID Implementation Plan for Maintenance Depots

Department of Defense
Unique Identification (UID) Implementation Plan
for:
DoD Maintenance Depots

May 2005

Prepared by the Office of the Secretary of Defense
Material Readiness and Maintenance Policy

Issued May, 2005
Approach to UID IOC at DoD Maintenance Depots

Developed a 3 phase approach:

1. Establish the Capability to Responsibly Plan and Manage UID Implementation at the Depot.

2. Establish the Capability to Implement Approved UID Automated Information System (AIS) Plans and Policies.

3. Establish the Capability to Implement Approved UID Parts Marking Plans and Policies.
IUID Implementation Template for DoD Maintenance Depots

Defines the outcome of the 3 phase depot implementation approach derived from successful examples:

1. Depot IUID processes and associated doctrine.

2. Capability to uniquely identify and mark items using DoD sanctioned serialization schemas and parts marking techniques (plates, labels, DPM)

3. Capability to automatically capture, modify, and query UID data in a local database and to transmit that data to a DoD centralized registry.

Describes organized steps to plan and successfully execute implementation and achieve outcomes
1. Establish depot IUID processes and associated doctrine

1. Establish IUID team

2. Initiate preliminary research and planning efforts
   • Develop an IPT Plan of Action and Milestones
   • Research candidate items
   • Research parts marking sourcing options (contract or organic)
   • Determine local serialization schema
   • Initiate engineering analysis (where and how)
   • Investigate resource requirements (e.g., local DB, communication API, facility, training)

3. Map current processes
2. Determine the new business environment and develop a marking plan for initial items

1. Develop an implementation schedule for initial items
   - Selection of best candidates
   - Setting production goals and timelines

2. Establish local serialization schema

3. Address parts marking technical requirements
   - Obtain tech data
   - Determine where and how to mark items
   - Develop necessary changes (processes, materiel specs, standards, engineering drawings, etc)

4. Establish sourcing options (initiate contracts as necessary)

5. Determine and map the new environment
   - Determine accurate as-is then move to “to-be”
   - Materiel handling processes
   - Information processes
2. (continued) Determine the new business environment and develop a marking plan for initial items

6. Ready parts marking capability
   • Establish local DB or integrate with existing system
   • Develop interface with UID registry for both depot manufactured and legacy items

7. Establish management structure (roles – responsibilities, performance outcomes/expectations)

8. Draft depot doctrine (e.g., instructions, management plans, SOPs, performance metrics)

9. Set up QC/QA processes for marking and to monitor performance metrics

10. Prepare Budget

11. Create final plan for initial parts marking items
3. Execute Marking Plan and Develop a Full Implementation Plans for Remaining Items

1. Implement the plan for initial items
   • Mark and register
   • Document experiences and monitor/measure performance outcomes

2. Develop full implementation plan for all other items

3. Finalize depot doctrine (e.g., instructions, management plans, SOPs, performance metrics)

4. Review and adjust funding as necessary

5. Execute the implementation plan (now becomes the depot IUID program)

6. Initiate CPI program
Special Considerations

- Alignment within Services (coordination, collaboration, courtesy)
- Single solution ("holistic" not always possible)
- Information flow (interoperability)
- IUID IPT (internal vs external)
- AIS interfaces … tough nut to crack
Measuring Progress
Instructions: Color code steps undertaken to indicate level of progress.
Questions?
**MR&MP Goal**

“to provide and sustain the optimum level of materiel readiness”

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**Unique**

- "As-is" systems and processes
- **Key Transformation Enablers**
  - Accurate Asset Visibility
  - Common Data
  - IUID

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**Common**

- "To-be" systems and processes
- **SIM**
- LCM, RCM, CBM, CM, MM

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Transition from “unique” to “common” systems

- IUID is the key base management transformation enabler
- Enables advanced management and CPI for sustained optimization
• IUID – AIT – AIS relationships
  – The point of common data and data standards

  Manual entry

  Required to be DoD UID compliant

  AIT Static (2D, bar codes)

  RFID
  • Passive
  • Active

  MEMS

  Embedded

  High Capacity
  • CMB, OMC, etc.

  IUID

  AIOT

  AIS

  Automated entry

  IETMs and technical data
• AIS – SIM – network – functional information relationships

- **UID Registry**
- **DoD network**
- **Service network**

**AIS**
- Static (2D, bar codes)
- **Automated entry**
- **Manual entry**

**IUID**
- Required to be DoD UID compliant

**IUID Registry**

**Business functions**
- Financial management
- Asset accountability
- Contract and ERP data

**Materiel management functions**
- Material handling processes: manufacture, supply, distribution, demilitarization, disposal, reallocation, ...
- Weapon system management: maintenance, RCM, LCM, CBM+, CM, airworthiness, engineering data, MWO, acquisition, performance data, OEM and PBA data, use history, readiness reporting, ...
- Other sustainment functions: repair cycle times, spares forecasting, manufacturer performance, ...

**Operational functions**

**RFID**
- Passive
- Active

**High Capacity**
- CMB, OMC, etc.

**MEMS Embedded**

**IETMs and technical data**

**FIG 3-04**
# Sustain Materiel Readiness (Optimized)

## Total Asset Management

<table>
<thead>
<tr>
<th>Life Cycle Management</th>
<th>Condition Based Maintenance</th>
</tr>
</thead>
</table>

## Configuration Management

## Reliability Centered Maintenance

## Maintenance and Materiel Management

### Design Configuration Model

- Serial Number Tracking
- Purchasing
- Invoicing
- Scrap Parts
- Unapproved Parts
- Electronic Documentation
- Warranty
- Repair
- Exchange Parts
- Loan/Borrow
- Cost-to-Repair
- Shop Tear
- Down Report
- Line Removal
- Data
- Schedule
- Interruption Data
- System Configuration
- System Performance
- Engineering Data
- Pilot and Maint. Log
- Operational Hrs & Cycles

### DoD Common Data / Data Exchange Sets (DEXs)

### Item Unique Identification (IUID) of Parts

### Total Asset Visibility

### Serialized Item Management

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**FIG 5-02**

Configuration Management
## Implementation: Where are we today?

**USD(AT&L) Policy Memo 23 December, 2004**

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Responsibility</th>
<th>Q1 FY05</th>
<th>Q2 FY05</th>
<th>Q3 FY05</th>
<th>Q4 FY05</th>
<th>FY06</th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality Assurance Plan for UID</td>
<td>DCMA</td>
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<tr>
<td>OSD UID Budget Guidance to Components</td>
<td>OSD AT&amp;L</td>
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<tr>
<td>Legacy UID Implementation Plan for DoD Depots</td>
<td>OSD L&amp;MR</td>
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<tr>
<td>UID Program Plans (ACAT 1D)</td>
<td>Pgm Mgr</td>
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<tr>
<td>IOC Legacy Marking Capability at Pilot Organic Depots</td>
<td>Military Departments</td>
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<tr>
<td>FOC UID CONOPS for DoD Maintenance</td>
<td>OSD L&amp;MR</td>
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<td>May 06</td>
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<tr>
<td>UID Program Plans (All Programs)</td>
<td>Pgm Mgr/Item Mgr</td>
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<td>May 06</td>
<td></td>
</tr>
<tr>
<td>All GFE Meets UID Policy Requirements</td>
<td>Pgm Mgr/Item Mgr</td>
<td></td>
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<td>Jan-06</td>
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<tr>
<td>All Existing Serialized Assets Entered in UID Registry</td>
<td>Pgm Mgr/Item Mgr</td>
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<td>Sep-07</td>
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<tr>
<td>FOC Legacy Marking Capability at All Organic Depots</td>
<td>Military Departments</td>
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<td></td>
<td></td>
<td></td>
<td>Sep-07</td>
<td></td>
</tr>
<tr>
<td>Complete UID Marking of All Legacy Items</td>
<td>Pgm Mgr/Item Mgr</td>
<td></td>
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<td>Dec-10</td>
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</tbody>
</table>

= Program Office Plans  

= Maintenance Community Plans
Current Status (≈)

IUID Enables Improved Material Maintenance (New Items)

- Improved Material Maintenance
- Make Informed Decisions
- Access Data
- Transact Data
- WAWF/AIT Infrastructure
- IUID Registry/Service DSS
- Mark Items
- Engineering
- Funding
- Implementation Plan
- Requirements
- Statement

IUID for Improved DoD Asset Tracking and Financial Accounting (Legacy Items)

- Material Maintenance
- Make Informed Decisions
- Access Data
- Transact Data
- WAWF/AIT Infrastructure
- IUID Registry/Service DSS
- Mark Items
- Engineering
- Funding
- Implementation Plan
- Requirements
- Statement

Overall current implementation status

Pilot Projects

IUID Enables Improved DoD Materiel Readiness (SIM)

- Improved Materiel Readiness
- Make Informed Decisions
- Access Data
- Transact Data
- WAWF/AIT Infrastructure
- IUID Registry/Service DSS
- Mark Items
- Engineering
- Funding
- Implementation Plan
- Requirements
- Statement

IUID Enables Improved Material Maintenance (Legacy Items)
<table>
<thead>
<tr>
<th>Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Managers</td>
</tr>
<tr>
<td>Contracting Officers</td>
</tr>
<tr>
<td>Supporting Contractors</td>
</tr>
<tr>
<td>Defense Contracting Management Agency</td>
</tr>
<tr>
<td>IUID Registry Administration</td>
</tr>
<tr>
<td>Supply Systems</td>
</tr>
<tr>
<td>Transportation Systems</td>
</tr>
<tr>
<td>Top Level Accountability Systems</td>
</tr>
<tr>
<td>Maintenance Activities</td>
</tr>
<tr>
<td>Defense Reutilization and Marketing Offices</td>
</tr>
<tr>
<td>Component Headquarters</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Define population of individual items to be marked, tracked or serial managed</td>
</tr>
<tr>
<td>• Work with engineering community, item managers, contractors and depots to mark items</td>
</tr>
<tr>
<td>• Work with information systems to develop IUID-enabled SIM processes for advanced management functionality</td>
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<tr>
<td>• Get IUID requirements on contract</td>
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<tr>
<td>• Insert IUID clause in all supply contracts</td>
</tr>
<tr>
<td>• Develop and insert appropriate SIM information requirement clause for applicable contracts</td>
</tr>
<tr>
<td>• Delivers IUID and registers pedigree data</td>
</tr>
<tr>
<td>• Maintains stewardship of Government Furnished Property</td>
</tr>
<tr>
<td>• Provides accountability of contractor items placed into government installations and facilities</td>
</tr>
<tr>
<td>• Inspects and accepts IUID items</td>
</tr>
<tr>
<td>• Provide oversight of Government Furnished Property</td>
</tr>
<tr>
<td>• Provide oversight of initial IUID-enabled SIM information requirements per contract clauses</td>
</tr>
<tr>
<td>• Provide program and technical support using IUID associated data for analyzing the cost, schedule and technical performance of contractor programs and systems</td>
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<tr>
<td>• Establish interfaces with WAWF and Property Systems</td>
</tr>
<tr>
<td>• Maintain the IUID Registry</td>
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<tr>
<td>• Establish interfaces with item history, maintenance, system configuration, and other pertinent technical databases</td>
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<tr>
<td>• Issue, receipt, transfer, and storage transactions involving IUIDs</td>
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<tr>
<td>• Track repairable asset shipments and transportation transactions using IUID</td>
</tr>
<tr>
<td>• Receipt transactions involving IUIDs</td>
</tr>
<tr>
<td>• Maintain IUID accountable property records current and correct in the applicable system of record. Report lost, destroyed or expended IUIDs to the appropriate information systems and databases</td>
</tr>
<tr>
<td>• Incorporate IUID processes into all relevant transactions</td>
</tr>
<tr>
<td>• Mark legacy items as required</td>
</tr>
<tr>
<td>• Associate maintenance events to IUID items</td>
</tr>
<tr>
<td>• Coordinate the development of IUID processes and SIM requirements with the appropriate information systems</td>
</tr>
<tr>
<td>• Receipt transactions involving IUIDs</td>
</tr>
<tr>
<td>• Report disposition of IUIDs</td>
</tr>
<tr>
<td>• Provide oversight of respective maintenance and materiel management IUID efforts.</td>
</tr>
<tr>
<td>• Establish effective policy and business rules for the use of IUID-enabled SIM processes within maintenance and materiel management processes</td>
</tr>
</tbody>
</table>
Online Resources

• UID Website
  – http://www.acq.osd.mil/dpap/uid

• IUID Toolkit
  – http://www.iuidtoolkit.com
  – Four tracks: PMs, Suppliers, Depot, Warfighter

• DAU UID Special Interest Area
  – Within Acquisition Community Connection