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ACQUISITION,
TECHNOLOGY
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MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
DIRECTOR, DEFENSE RESEARCH AND ENGINEERING
ASSISTANT SECRETARIES OF DEFENSE
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
DIRECTOR, ADMINISTRATION AND MANAGEMENT
DIRECTORS OF THE DEFENSE AGENCIES
DIRECTORS OF THE DOD FIELD ACTIVITIES

SUBJECT: Forecast of Policy for Unique Identification of Tangible Items – UPDATE

On February 11-12, 2003, the Department of Defense (DoD) Unique Identification (UID) Integrated Product Team (IPT), met to further define policy requirements and an implementation strategy to achieve a long-term UID item marking vision. During the two-day offsite meeting, the IPT re-validated the vision established in my December 19, 2002 memorandum, defined key terms for unique identification of tangible items, and made great strides in rationalizing requirements of existing standards to support DoD's use of unique identification. The purpose of this memorandum is to communicate that progress and establish the next steps for the UID IPT.

The IPT validated that:

- The purpose of UID is to identify a set of data for tangible assets that is globally unique and unambiguous, ensures data integrity and data quality throughout the life of the asset, and supports multi-faceted business applications and users.
- The unique identification of tangible assets will rely, to the maximum extent practicable, on international standards and commercial item markings and not impose unique government requirements.
- Implementation of UID will facilitate item tracking in DoD business systems as well as the capture of reliable and accurate data for life-cycle asset management, accountability, and financial purposes.
- This UID solution is different from that being developed for real property.

The IPT identified the minimum data set for the UID and defined several key terms integral to the implementation of a UID policy. Included in those terms are the data content elements of the UID. Familiarization and understanding of those key terms and the evolving policy can be accomplished by reviewing the attachments to this memorandum.

Additional policy communications will be forthcoming as further definition is achieved. My plan remains to make UID item marking a mandatory requirement for all new weapons systems programs, including major modifications, no later than July 2003.

The IPT will continue to work on remaining issues in the following areas:

- Develop policy for marking of tangible items already in inventory and operational use, specifically focusing on requirements of major system modifications.
- Develop policy modifications to MIL-STD-129, MIL-STD-130, DoD 4140.1-R, DoDI 5000.2, DoDI 5000.64, DoD 7000.14-R, CJCSI 3170.1C, DCMA One Book, and MIL Handbook 61A to ensure synchronized policy execution.
- Issue an Advance Notice of Proposed Rulemaking to expedite two Defense Federal Acquisition Regulation Supplement (DFARS) cases:
    - One on item marking, and
    - One on item value.
- Develop business strategies to prioritize the application of UID to legacy items.
- Submit proposed collaborative standards solution through International Organization of Standards (ISO) process to obtain approval by Sub-Committee 31
- Prepare a pledge document for key business stakeholders to ensure support for this strategic imperative
- Develop a users guide on UID requirements and application.
- Determine minimum architecture/systems requirements to capture UID information at inspection and acceptance and identify opportunities for rapid implementation.

The point of contact is Lt Col Gregory Redick. Questions concerning this guidance should be addressed to him at (703) 614-3883 or by email at Gregory.redick@osd.mil.

Attachment:
As stated

MICHAEL W. WYNNE

Key Terms Defined for Unique Identification (UID) of Tangible Items

The UID Integrated Product Team (IPT) Standards Team defined several key terms integral to the implementation of a UID policy. Included in these terms are content data elements of the UID, the construction of which will provide an item mark that globally, uniquely, and unambiguously identifies tangible assets for traceability. The data elements, and other key terms, are defined as follows:

- **Enterprise**: The entity responsible for assigning [permanent] unique item identifiers to tangible assets
- **Enterprise Identifier**: A code uniquely assigned to an enterprise by a registration (or controlling) authority
- **Registration (or Controlling) Authority**: An organization responsible for assigning a non-repeatable identifier to an enterprise [e.g., Data Universal Numbering System (DUNS), European Article Number (EAN), Commercial and Government Entity (CAGE) code, or Federal Employer Identification Number (FEIN)]
- **Unique Serial Number**: A code assigned by the enterprise to an item providing for the differentiation of that item from any other like and unlike item
- **Product Serial Number**: A code assigned by the enterprise to an item providing for the differentiation of that item from any other like item
- **Part Number**: A code assigned by the enterprise responsible for the configuration of a class of items with the same form, fit, function, and interface

DRAFT
POLICY FOR
UNIQUE IDENTIFICATION OF TANGIBLE ITEMS

UID Data Content Elements

In defining the optimal data content elements, data elements that could change over time were excluded in order to ensure the UID would remain constant over the life of the asset. To track important data elements susceptible to change over time, such as acquisition cost and part number, the IPT recommended those data elements be linked to the UID via an information system (IS) rather than being embedded in the data content. The following data content elements were identified to fulfill the required purpose of the UID:

- For part numbers that may change over time due to redesign or improvement, the UID is a combination of the **enterprise identifier** and a **unique serial number**
- Where industry practice does not change part numbers over the life of the specific item, the UID is a combination of the **enterprise identifier**, the **part number**, and the **product serial number**

Proposed Data Standard (Collaborative Solution)

After defining the necessary data content elements, current industry standards were compared for data content and structure to identify a data standard to support the global UID. Differences in data syntax were found to exist in ISO 15434, Syntax for High Capacity ADC Media and ISO Technical Specification (TS) 21849, Product Identification - Integrated Data Processing Part Management. The Standards Team proposed a collaborative solution to:

- Modify TS 21849 to include ISO/IEC 15434 syntax, specifically data element separator, header, and terminator characters
- Request of the ISO/IEC JTC1/SC31 that the modified TS 21849 be added to ISO/IEC 15434 as a new code format (draft developed; pending submittal to US Technical Advisory Group, Apr 2003)
- Use the proposed revised ISO/IEC 15434 as the UID syntax standard for interim and post approval process

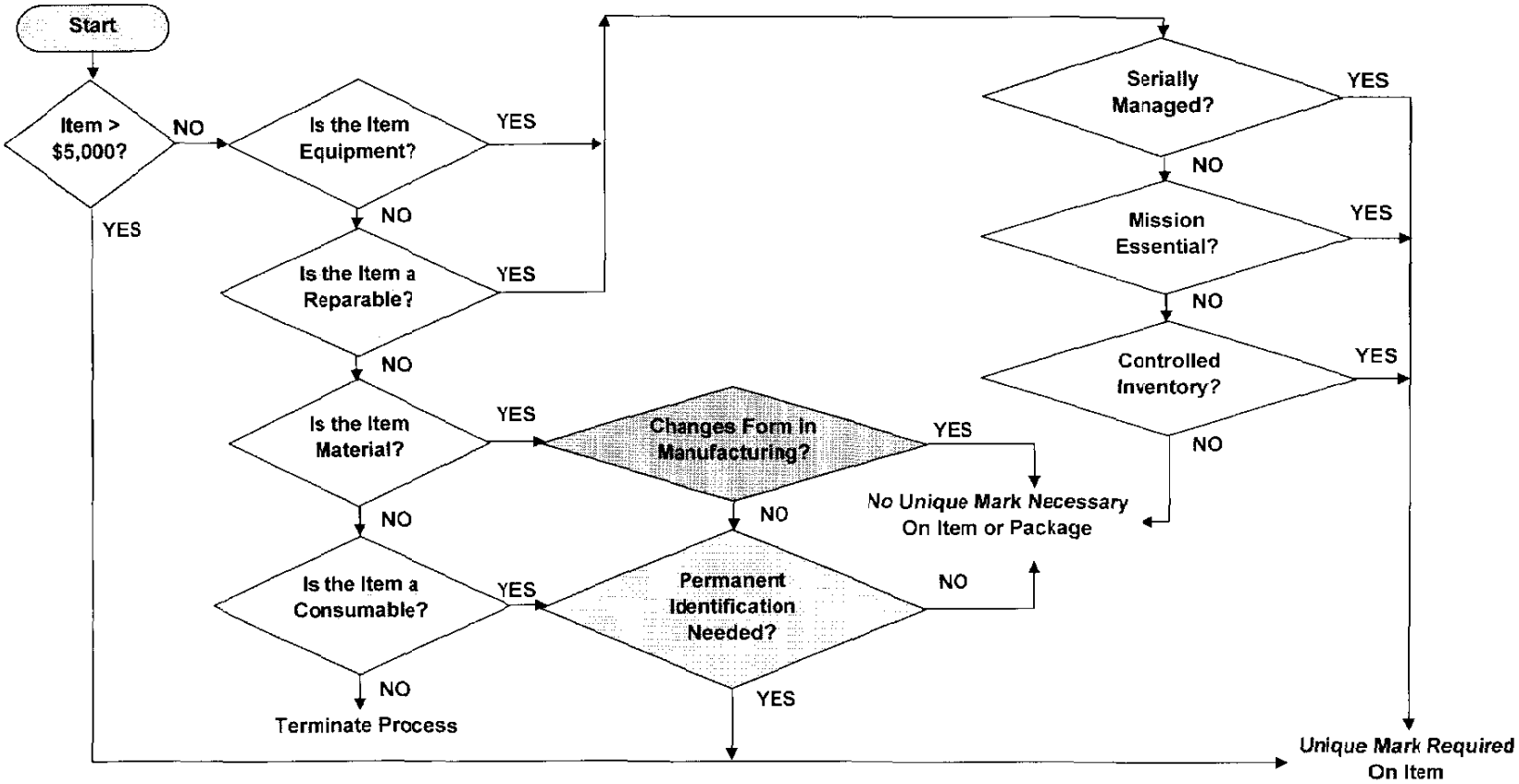
The proposed collaborative data standard will enhance interoperability across industries and governments by providing standard, unambiguous message syntax for machine reading of the UID.

Applying UID

The unique item marking of tangible items is required under certain circumstances, and takes into consideration various requirements of functional areas needing to track and identify item information. In general, a UID is required to be applied to tangible items as follows (also see attached decision tree):

- Commercial markings on tangible items will be accepted as long as they meet data requirements and syntax for unique identification for the DoD.
    - Generally, consumable items are marked by industry with sufficient information to distinguish between unlike items.
    - The Universal Product Code will generally be acceptable for marking items that do not require a differentiation between like items.
- If an item is greater than $5,000 in acquisition cost, it will be uniquely marked.
- If an item is less than $5,000 in acquisition cost, it will be uniquely marked if it is a piece of equipment or a reparable item that is either serially managed, mission essential, or controlled inventory. If the item is either a consumable item or material, it will be uniquely marked only if permanent identification is required.
- Items with an acquisition cost greater than $5,000; or items within an end item will also require a UID where those items are reparable, serially managed, mission essential or controlled inventory with a cost less than $5,000; will be recorded in an appropriate property or inventory management information system. This requirement will impact existing logistics and configuration management processes.
- Equipment items with an acquisition cost greater than $100,000 will be capitalized and depreciated in accordance with the DoD Financial Management Regulation (DoD 7000.14-R).

Marking Tangible Items (Draft 03/11/03a)



Marking - The application of legible numbers, letters, labels, tags, symbols, or colors to ensure proper handling and identification during shipment and storage (DOD 4140.1-R).

Item - A generic term meaning any article produced, stocked, stored, issued, or used (DoD I 5000.64).

Item Identification. Sufficient data to establish the essential characteristics of an item that give the item its unique character and differentiate it from other supply items (DOD 4140.1-R).

Tangible - Capable of being touched; material (The American Heritage Dictionary, Office Edition, July 1987).

Material - Of, composed of, or pertaining to physical substances (The American Heritage Dictionary, Office Edition, July 1987). Materials are tangible items that may lose their identity when incorporated in an end item. (e.g., sheet metal). FAR 45.301 defines material as property that may be incorporated into or attached to a deliverable end item or that may be consumed or expended in performing a contract. It includes assemblies, components, parts, raw and processed materials, and small tools and supplies that may be consumed in normal use in performing a contract.

Equipment - Tangible items that are not intended to be held for sale or consumed in normal operations. Includes military equipment, support equipment, general purpose equipment, special test equipment, and special tooling. Includes Class VII, Major End Items, a final combination of end products that is ready for its intended use, that is, launchers, tanks, mobile machine shop, and vehicles, etc. (DOD 4140.1-R). It does not include real property, reparables, consumables or materials.

Reparable - An item of supply subject to economical repair for which repair (at either depot or field level) is considered in satisfying computed requirements at any inventory level (DOD 4140.1-R). Examples include aircraft engines, rotors, guidance systems, and electronic circuit boards. Excludes medical equipment parts.

Consumables - A consumable is an item of supply that is normally expended or used up beyond recovery in the use for which it is designed or intended (DOD 4140.1-R) (e.g. clothing and supplies). For purposes of this decision tree, explosives are treated as consumable items; and bulk petroleum, oil and lubricants delivered by pipeline are excluded. For packaging purposes, DoD might request additional marks/information in the mark that vendors should be able to provide without difficulty, or significant expense.

Serially Managed - Includes reparable items down to and including sub-component reparable unit level; life-limited, time-controlled, or items requiring records (e.g., logbooks, aeronautical equipment service records, etc.); and items that require technical directive tracking at the part level [DUSD(Logistics & Material Readiness) Memorandum, September 4, 2002, Serialized Item Management].

Mission Essential/Item Essentiality. A measure of an item's military worth in terms of how its failure (if a replacement is not immediately available) would affect the ability of a weapon system, end item, or organization to perform its intended functions. (DOD 4140.1-R).

Controlled Inventory - Those items that are designated as having characteristics that require that they be identified, accounted for, segregated, or handled in a special manner to ensure their safeguard and integrity. Includes classified items (require protection in the interest of national security), sensitive items (require a high degree of protection and control due to statutory requirements or regulations, such as precious metals; items of high value, highly technical, or hazardous nature; and small arms) , and pilferable items (items having a ready resale value or application to personal possession, which are especially subject to theft) (DOD 4140.1-R); and safety controlled items.

DoD 7000.14-R, DoD Financial Mangement Regulation

Real Property - Fixed assets that are comprised of land and the rights to land; buildings to include capitalized additions, alterations, improvements, and rehabilitations; and other structures and facilities. Real property does not include personal property (weapons systems and other military equipment). (FMR, Vol 1)

General PP&E consists of tangible assets that meet all of the following criteria:
a. Have an estimated useful life of two years or more;
b. Are not intended for sale in the ordinary course of operations;
c. Are acquired or constructed with the intention of being used or being available for use by the entity; and
d. Have an initial acquisition cost, book value or, when applicable, an estimated fair market value (see paragraph 060202 for definitions of these terms) that equals, or exceeds, the DoD capitalization threshold. The current DoD capitalization threshold is $100,000 for both General and Working Capital Funds. FMR, Vol 4, Chapter 6, Aug 2000, Property, Plant and Equipment

Operating Materials and Supplies. Operating materials and supplies consist of tangible personal property to be consumed in normal operations. Excluded are (a) goods that have been acquired for use in constructing real property, (b) stockpile materials, and (c) inventory. FMR, Volume 4, Chapter 4, OPERATING MATERIALS AND SUPPLIES AND STOCKPILE MATERIALS, January 1995.

DoD 4140.1R, DoD Material Management Regulation

AP16.13. Consumable Item. An item of supply (except explosive ordnance and major end items of equipment) that is normally expended or used up beyond recovery in the use for which it is designed or intended.

AP16.16. Controlled Inventory Items. Those items designated as having characteristics that require that they be identified accounted for, secured, segregated, or handled in a special manner to ensure their safeguard or integrity. Controlled inventory item categories in descending order of the degree of control normally exercised are, as follows:
AP16.16.1. Classified Items. Materiel that requires protection in the interest of national security.
AP16.16.2. Sensitive Items. Materiel that requires a high degree of protection and control due to statutory requirements or regulations, such as narcotics and drug abuse items; precious metals; items of high value, highly technical, or hazardous nature; and small arms and ammunition.
AP16.16.3. Pilferable Items. Materiel having a ready resale value or application to personal possession, which is especially subject to theft.

AP16.33. End Item. A final combination of end products, component parts, and/or materials ready for its intended use, e.g., a ship, tank, mobile machine shop, or aircraft [Joint Pub 1-02, reference (mmm)].

AP16.35. Essential Item. A support item or a repair part whose absence renders the supported system or end item inoperable.

AP16.61. Item Essentiality. A measure of an item's military worth in terms of how its failure (if a replacement is not immediately available) would affect the ability of a weapon system, end item, or organization to perform its intended functions.

AP16.62. Item Identification. Sufficient data to establish the essential characteristics of an item that give the item its unique character and differentiate it from other supply items.

AP16.72. Marking. The application of legible numbers, letters, labels, tags, symbols, or colors to ensure proper handling and identification during

AP16.61. Item Essentiality. A measure of an item's military worth in terms of how its failure (if a replacement is not immediately available) would affect the ability of a weapon system, end item, or organization to perform its intended functions.

AP16.62. Item Identification. Sufficient data to establish the essential characteristics of an item that give the item its unique character and differentiate it from other supply items.

AP16.72. Marking. The application of legible numbers, letters, labels, tags, symbols, or colors to ensure proper handling and identification during shipment and storage.

AP16.104. Property Accountability Record. The official record of tangible personal property, including inventory, owned by the Department of Defense that is maintained to identify the quantities of items on-hand, unit prices, locations, physical condition, receipt and issue records, authorized stock numbers, item descriptions, and other such information necessary to properly account for materiel and exercise other inventory management responsibilities.

AP16.114. Reparable Item. An item of supply subject to economical repair and for which the repair (at either depot or field level) is considered in satisfying computed requirements at any inventory level.

DoD I 5000.64, Defense Property Accountability

E2.1.12. Controlled Inventory Items. Those items designated as having characteristics that may require them to be identified, accounted for, secured, segregated, or handled in a special manner to ensure their safekeeping and integrity. See DoD 4100.39-M, Volume 10 [(reference (j)], Table 61, "Controlled Inventory Item Code." Controlled inventory items are (in descending order of the degree of control normally exercised):

E2.1.12.1. Classified Items. Items that require protection in the interest of national security.

E2.1.12.2. Sensitive Items. Items that require a high degree of protection and control due to statutory requirements or regulations, such as narcotics and drug abuse items; precious metals; items that are of a high value, highly technical, or a hazardous nature; and small arms, ammunition, explosives, and demolition material.

E2.1.12.3. Pilferable Items. Items that have a ready resale value or application to personal possession and that are, therefore, especially subject to theft. (DODI 5000.64)

E2.1.15. End-Item. The final combination of end products, component parts, and/or materials that is capable of functioning independently.

E2.1.20. Item. A generic term meaning any article produced, stocked, stored, issued, or used.

E2.1.27.1. Personal Property. Any property including military equipment, but excluding real property, consumable items, component parts of a higher assembly, or items that lose their individual identity through use. Some personal property is subject to capitalization if its cost exceeds the DoD capitalization threshold, has an estimated useful life of 2 years or more, is not intended for sale in the ordinary course of operations, is acquired or constructed with the intention of being used or being available for use by an entity. Intangible assets such as software, copyrights, and similar intellectual assets are considered personal property so long as they meet these criteria. Cash, marketable securities (e.g., stocks and bonds), and accounts receivable are considered monetary (or liquid) assets rather than personal property.

DUSD(Logistics & Material Readiness) Memorandum, September 4, 2002, Serialized Item Management (SIM)

Serially Managed Items. Populations of selected items will be identified and each item in the population permantently marked to enable SIM. Selection of the populations to be managed shall be based on the potential benefits that willl accrue from the enhanced management capabilities and increased information to be made available. As a miimum, it is approapriate to consider selecting item populations from within the following categories:

- repairable items down to and including sub-component repairable unit level,
- life-limited, time-controlled, ot items with records (e.g., logbooks, aeronautical equipment service records, etc,), and
- items that require technical directive tracking at the part number level.

Three data elements will comprise the universally unique identification number for each serialized item:

- Original Equipment Manufacturer (OEM) identification code [Contract and Government Entity (CAGE) preferred, Dunn and Bradsteet Number, or UCC.EAN]
- OEM part or reference number, and
- OEM serial number (single use per manufacturer identification code)

FAR 45, Subpart 45.3 - Providing Government Property to Contractors, 45.301 Definitions

"Material," as used in this subpart, means property that may be incorporated into or attached to a deliverable end item or that may be consumed or expended in performing a contract. It includes assemblies, components, parts, raw and processed materials, and small tools and supplies that may be consumed in normal use in performing a contract.