



ACQUISITION,
TECHNOLOGY
AND LOGISTICS

PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE

3015 DEFENSE PENTAGON
WASHINGTON, DC 20301-3015

DEC 19 2002

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

On December 4-5, 2002, an offsite workshop was conducted at my direction on Unique Identification (UID) item marking. The objective was to initiate a Department of Defense (DoD) migration strategy to achieve a long-term UID item marking vision that improves life-cycle asset management across the defense department. Attendees included representatives from DoD Logistics, Acquisition, Finance, and Information Management; DoD Components; Joint Staff; industry; and international representatives (United Kingdom and Australia). The workshop was a success for many reasons.

Our collective DoD goal is to implement a coordinated set of policies setting forth the strategic imperative for uniquely identifying tangible items that relies to the maximum extent practicable on, international standards and commercial item markings and does not impose unique Government requirements. Uniquely identifying tangible items will facilitate item tracking in DoD business systems and facilitate capturing reliable and accurate data for life-cycle asset management and financial accountability purposes. Achievement of this goal will help ensure:

- Integration of item data across Department, Government and industry asset management systems, as envisioned by the DoD Financial Management Enterprise Architecture (FMEA) including:
 - Improved data quality and global interoperability
 - Rationalization of systems and infrastructure
- Improved item management and accountability
- Improved asset visibility and life-cycle management
- Clean audit opinions on the property, plant and equipment and operating materials and supplies portions of DoD financial statements



To accomplish this goal, I am establishing an Integrated Product Team (IPT) to further define policy requirements, and develop an implementation strategy, methods to measure productivity results, and an outreach and communication plan, as well as training and education requirements. The IPT will also recommend business rules, assess budget impacts, and determine requirements to facilitate capturing information on tangible items in property and inventory management systems. The UID will impact legacy and new systems. The IPT should be mindful of UID policy impacts while developing or revising DoD policies and regulations and when developing an implementation plan. I particularly want the IPT to assess the impact of this UID item marking vision on the Joint Strike Fighter program. Additionally, the attached draft policy guidelines, developed from the offsite workshop, should amplify existing interim policy regarding the use of UID item marking.

Policies, processes and systems requirements to be developed by the IPT shall consider and incorporate existing efforts and requirements of the DoD Components, Civilian Agencies, Joint Staff, Chief Information Officer, Comptroller, and Logistics. Membership from DoD Component program and item managers, as well as solicitation of information from our industry and international coalition partners, when and where authorized, is encouraged. By working together with our industry and international counterparts on issues of mutual concern, we will be able to accelerate meaningful and lasting change. I expect this IPT to provide regular updates to me, the Defense Acquisition Excellence Council (DAEC) and the Financial Management Modernization Program (FMMP) Steering Committee.

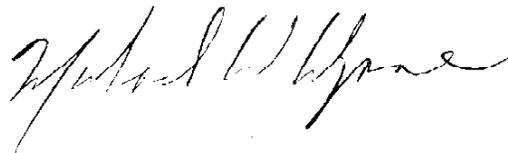
This is a significant effort requiring sustained momentum. Therefore, I have asked Ms LeAntha Sumpter, Defense Procurement and Acquisition Policy to lead the IPT and meet the following deadlines:

- First IPT meeting on February 12, 2003.
- Provide interim status report to me and the Service Acquisition Executives by February 25, 2003, (including a plan of action and milestones further refining the management and migration strategy).
- Provide detailed management and migration strategy for both new and legacy programs developed by April 2003.

My plan is to make UID item marking a mandatory requirement for all new weapons systems programs, including major modifications no later than July 2003. In addition, the Director, Defense Procurement and Acquisition Policy, will modify existing Federal and Defense Acquisition Regulations to ensure Government property changes are made to address capturing the acquisition cost of items, as well as appropriate marking policy resulting from the work of this IPT.

Please furnish the names of your IPT members to Lt Col Gregory Redick by January 31, 2003. Questions concerning this guidance should be addressed to him at (703) 614-3883 or by email at gregory.redick@osd.mil.

Attachments:
As stated



MICHAEL W. WYNNE

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POLICY PRINCIPLES FOR UNIQUE IDENTIFICATION OF TANGIBLE ITEMS

Why Unique Identification Marking of Items is Necessary

Automatic identification technology used in combination with standardized marking practices provides the Department the opportunity to differentiate an individual item from all others, throughout the DoD Supply Chain, commencing with acquisition and terminating with disposal/reutilization. In order to take advantage of this powerful management tool, it is necessary to implement a coordinated set of policies for uniquely identifying items entering the DoD inventory. That policy must rely to the maximum extent on commercial standards that comply and build on international standards. Unique item identification is required by DoD:

- To improve the acquisition of services and equipment and performance based logistics for the warfighter
- To capture timely, accurate and reliable data on tangible items (i.e., property, equipment, reparables, and consumables)
- To improve life-cycle asset management
- To track items in DoD and industry business systems for operational, logistic, and financial accountability purposes

What Tangible Items Must be Uniquely Marked

Unique item marking depends on whether an item is classified as equipment, reparables, or consumables and materials, as well as other important factors. The decision trees (Tables 1, 2 and 3) provide guidance for program or item manager use when determining what items must be uniquely marked.

- Equipment is defined as tangible items not held for sale or consumed in normal operations. Included are military equipment, support equipment, general-purpose equipment, Federal-unique equipment, special test equipment, and special tooling. These are typically Class VII, *Major End Items*; a final combination of end products ready for their intended use (e.g., launchers, combat vehicles, mobile machine shop, and general purpose vehicles). See DoD 4140.1-R, DoD 7000.14-R and DoDI 5000.64 for additional guidance.
 - If an equipment item's acquisition cost is greater than \$5,000, but less than \$100,000, it shall be uniquely marked for accountability purposes. If the acquisition cost is less than \$5,000, it should only be uniquely marked if the item is mission essential or a controlled item (see the Equipment Decision Tree for definitions of these categories, table 1).
 - If an equipment item's acquisition cost is greater than or equal to \$100,000, the item shall be uniquely marked and the acquisition cost shall be captured in an automated information system (AIS) supporting asset management.
- A spare is defined as a part, component, subassembly or assembly acquired for incorporation in an end item. Spares can be either repairable or consumable items. A

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reparable is an item of supply subject to economical repair and 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.

- The acquisition cost of a reparable item shall be captured in an AIS.
- If the reparable item is either mission essential, subject to serialized item management, or a controlled inventory item, a unique mark shall be required on the item (see Spares Decision Tree for definitions of these categories, table 2).
- A consumable is defined as an item of supply 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 guidance, explosives are treated as consumable items. Materials are tangible items that may lose their identity when incorporated in an end item (e.g., sheet metal).
 - The acquisition cost of materials and consumables shall be captured in an AIS.
 - If materials incorporated into end items in fabrication and assembly do not change form in manufacturing and permanent identification is needed, then a unique mark is required on the item.
 - If permanent identification is needed for consumables in operational use, then a unique mark is required on the item.
 - In the case of both materials and consumables, permanent identification is based on sensitivity, safety, maintainability, failure tracking, or other critical traceability need (see Consumables Decision Tree for definitions of these categories, table 3).

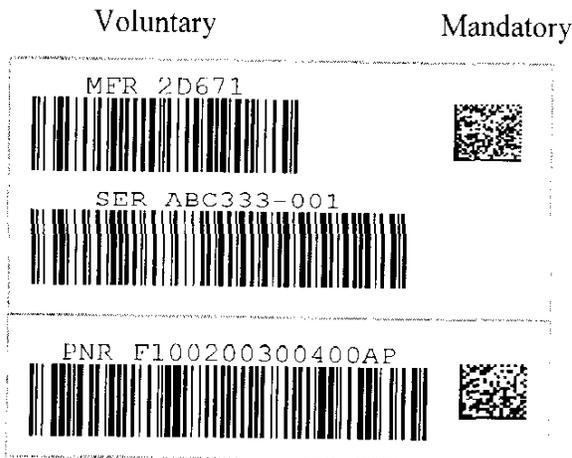
How and Where To Mark Tangible Items

- Any tangible item marking solution must be unique to that tangible item, globally identifiable and unambiguous. The International Organization for Standards (ISO) is the authority for global data standards, and it is DoD policy to prefer the use of ISO standards.
- ISO 10303, *Standard for the Exchange of Product Model Data*, is a key standard in the Joint Technical Architecture. The primary goal of the standard is to provide a neutral format for product data exchange over the entire life cycle of a product. ISO 10303 contains Application Protocol 239, *Product Life Cycle Support (PLCS)*, which provides a framework of standards to support acquisition and logistics processes throughout an item's life. Another key element of ISO 10303 is an emerging product/part identification data standard. Use of ISO 10303 by program and item managers will help facilitate achievement of PDUSD(AT&L) strategic vision.
- PDUSD(AT&L) issued an interim policy memorandum, subject: *Universal Identifier Code - Interim Policy*, dated September 6, 2002, requiring use of ISO 15418 and 15434 data and semantics standards for part and package marking.

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- ISO/IEC 15418, Application Identifiers and FACT Data Identifiers, contains EAN 8004, an Application Identifier (AI) for UCC/EAN Serial Identification. A prefix used to define bar code data fields, the AIs are numeric codes. Also prefixes, the Data Identifiers (DIs) have a format of one alphabetic character alone, or one alphabetic character prefixed by one, two or three numeric characters. Two standards that also address prefixes to define bar code data fields are being proposed by separate communities and are in varying stages of development; TS 21849 (which proposes alpha Text Element Identifiers as prefixes) and the MH10 Committee's MH10.8.7 (which proposes use of the DIs and AIs defined in ISO/IEC 15418 and ANSI MH10.8.2). It is DoD's desire that the various requirements for prefixes to define data fields be harmonized, and their data be interoperable with a view to embracement of an optimal single standard emerging as soon as possible. Absent harmonization, the interim policy will stand.
- In the event harmonization is not possible, a compromise is provided below. Industry specific standards are represented below by the linear bar-codes under "Voluntary." Use of ISO 15418 and 15434 as prescribed is represented by the data matrix symbols under "Mandatory." This compromise provides auditable data for Federal Aviation Administration (FAA) certification, requires ISO 15418 semantics and ISO 15434 syntax, and accommodates requirements of TS 21849. Should use of this compromise be necessary, any vendor that wishes to use an industry specific standard is welcome to do so, but only in addition to the mandatory DoD requirements previously described.



How Should the Acquisition Cost (i.e., contract price) Be Recorded by the Government?

- Acquisition cost should be recorded in an AIS or information management system supporting a tangible item (e.g., inventory or property system) at the time of acquisition, and not on or within the unique item mark.
- Acquisition personnel should ensure unit costs for all tangible items over \$100,000 are recorded accurately in the contract or other acquisition documentation (eg. simplified

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acquisition, other transactions) and supporting documentation retained in accordance with policy. For certain items, the contract must require items costing over \$100,000 be individually priced and that such prices be provided to the government.

When and Who Will Mark Items

- Program and/or item managers, with the support of a multi-functional integrated product team, are responsible for determining what items are marked to ensure the enterprise-wide needs of Defense are achieved in accordance with the interim guidance contained in this issuance.
- Marking decisions made shall also consider the warfighter, finance, logistics and acquisition community's requirements.

Contract Provisions Requiring Unique Identification of Items

Specific contract clause provisions implementing this policy will require tailoring to meet the specific needs of a particular application. When crafting contract clause language program and/or item managers and contracting officers should take care to ensure:

- International Organization for Standards (ISO) 15418/15434 syntax and semantics are designated as the overarching standards required by DoD for the encoding of high capacity AIT media. The UPC label is sufficient for all consumables and supplies, except consumable spares, fuel and explosives.
- Once an item has been assigned a serial number, it shall remain assigned for the life of that item even when the item is modified.
- Characters shall be as permanent as the normal life expectancy of the item and capable of withstanding the environmental tests and cleaning procedures specified for the item.
- If it is not practicable to apply a serial number on the item, a serial number shall be marked on a separate plate that shall be affixed directly below, or adjacent to, the identification plate.
- The UID construct should be based on a combination of the originating organization's ID and the serial number of the item: a manufacturer's ID will be from DUNS and a Government organization's ID will be CAGE. In addition, it may also include the manufacturers' part number. The UID may not contain any other data.
- Supplemental data (i.e. other data that needs to be marked on the item) should be provided separately from the UID construct, whether in the same tag or a separate tag. National Stock Numbers are not considered part of the UID but can be captured as supplemental data or captured in an AIS or associated information management system at the time of acquisition or delivery.

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(Draft) Equipment (Draft)

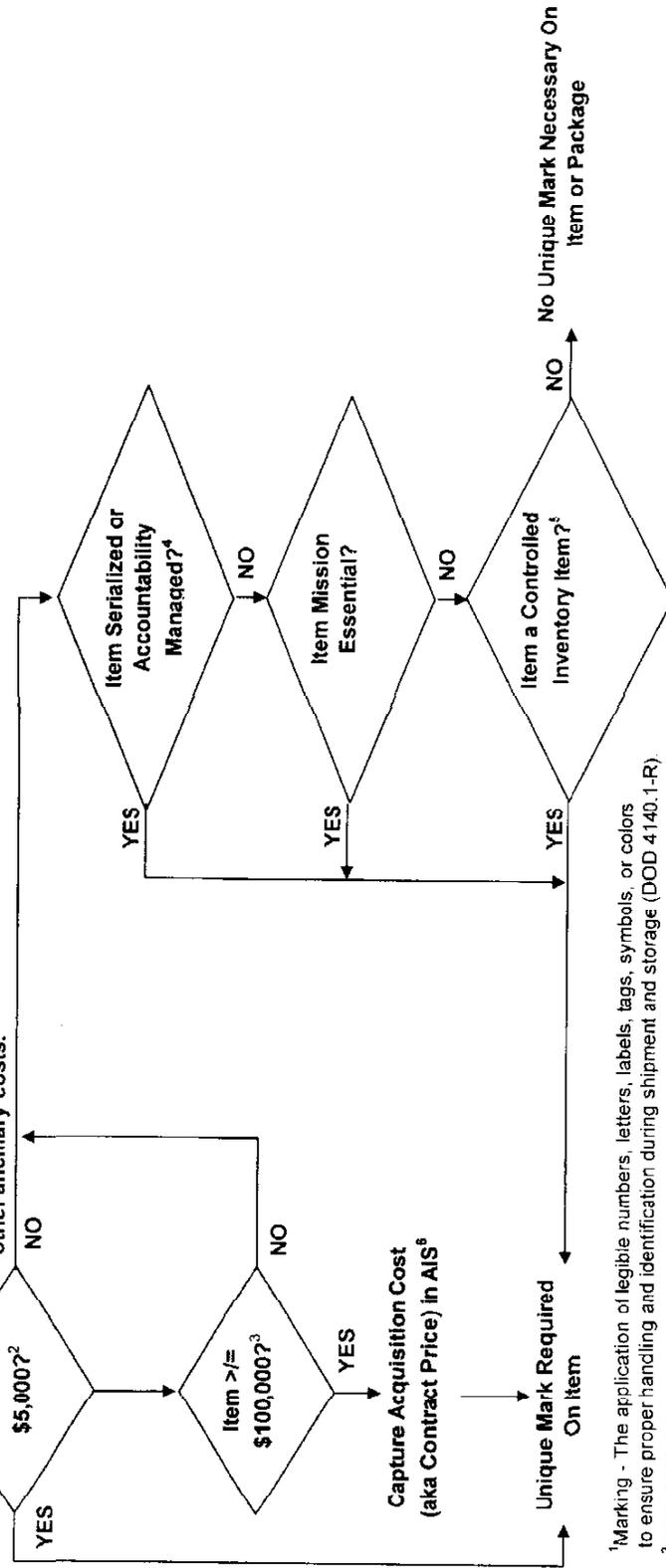
What Equipment Should Be Uniquely Marked¹?

Equipment - Tangible items that are not intended to be held for sale or consumed in normal operations.³ Includes military equipment, support equipment, general purpose equipment, Federal-unique equipment, special test equipment, and special tooling. These are typically 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, spares, repairables, consumables or materials.

Mission Essential Item - A tangible item that is critical to deployment, warfighting, manufacturing, or support operations.

Controlled Inventory Items - 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.⁵

Acquisition Cost - The amount, net of both trade and cash discounts, paid for the equipment, plus transportation costs and other ancillary costs.³



¹Marking - 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)

²DODI 5000.64

³Financial Management Regulation

⁴Includes items less than \$100,000 in acquisition cost that are accountable under DoD I 5000.64 and repairable items down to and including sub-component repairable unit level; life-limited time-controlled, or items requiring records (e.g., logbooks, aeronautical equipment service records, etc.); items that require technical directive tracking at the part level, and warranted items.

⁵Includes classified items (requires protection in the interest of national security), sensitive items (requires 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 is especially subject to theft) (DOD 4140.1-R), and safety controlled items.

⁶Automated Information System

(Draft) Spares and Reparables (Draft)

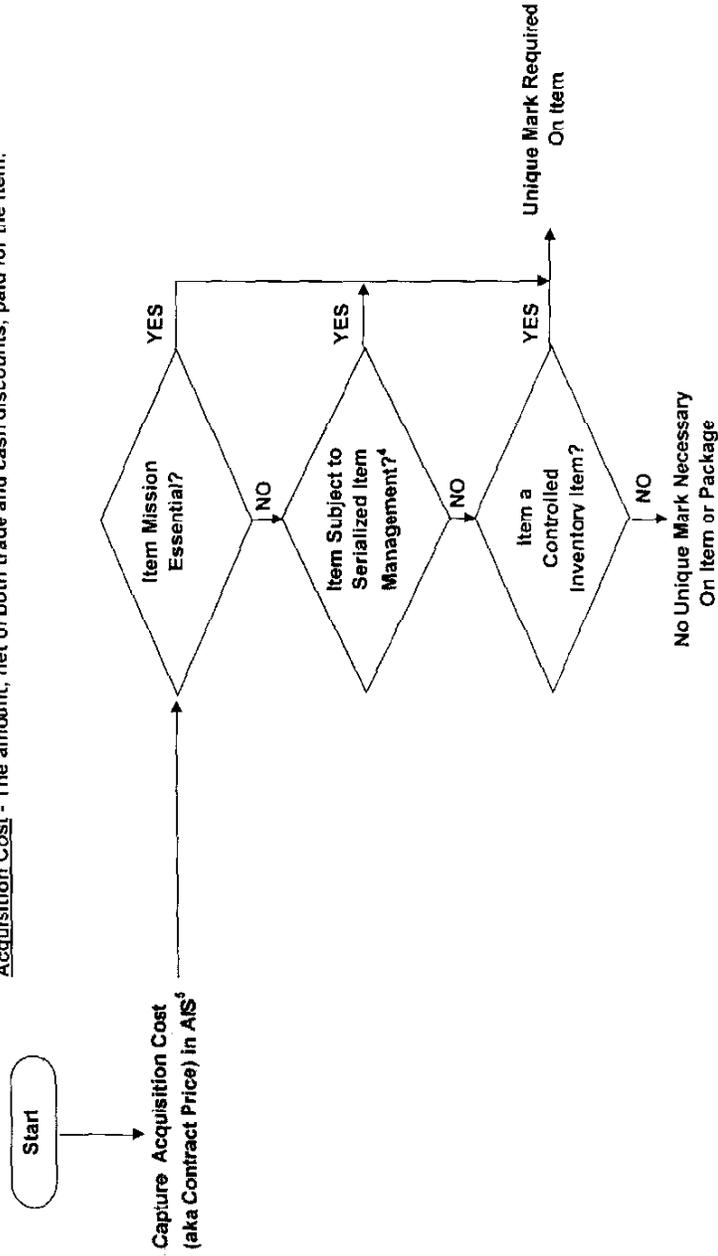
What Spares and Reparables Should Be Uniquely Marked¹?

Spares and Reparables - A spare is a part, component, subassembly or assembly that is acquired for incorporation in an end item. A reparable is an item of supply subject to economical repair and 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. For purposes of this decision tree, spares and reparables do not include medical equipment parts.

Mission Essential Spares & Reparables - Items that are critical to ensure successful deployment, warfighting, manufacturing, or support operations. Items should also be considered mission essential if they require repetitive AIS transactions to support these operations.

Controlled Inventory Spares & Reparables - For purposes of this decision tree, items that require a high degree of protection and control due to statutory requirements or regulations², such as flammable items, items containing hazardous materials or precious metals, or classified items (These are Controlled Inventory Items as defined in DOD 4140.1-R). Also includes safety-controlled items.

Acquisition Cost - The amount, net of both trade and cash discounts, paid for the item.³



¹Marking - 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).

²DODI 5000.64

³Financial Management Regulation

⁴Includes 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.); items that require technical directive tracking at the part level; and warranted items.

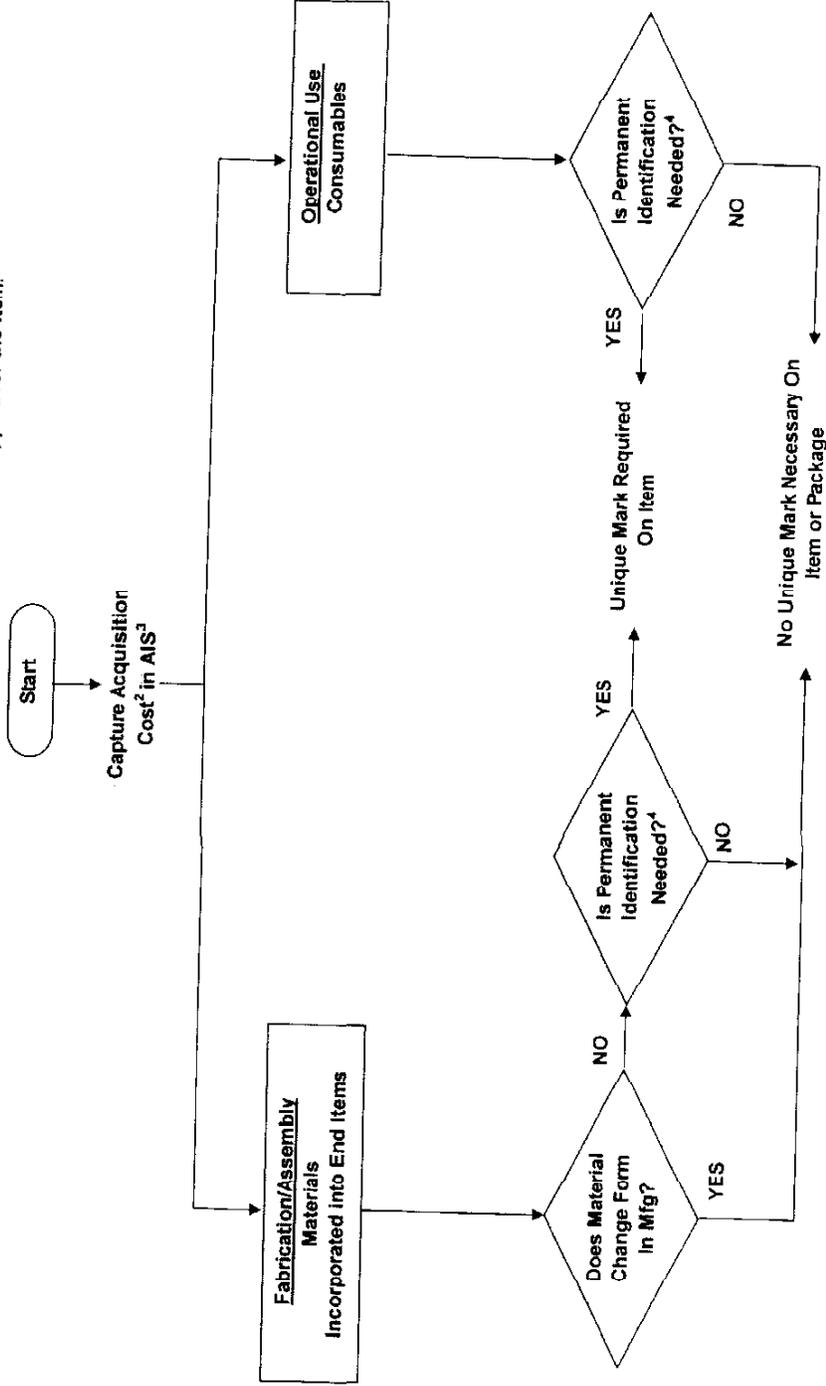
⁵Automated Information System

(Draft) Consumables and Materials (Draft)

What Consumables and Materials Should Be Uniquely Marked¹?

Consumables and Materials - 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. Materials are tangible items that may lose their identity when incorporated in an end item (e.g., sheet metal). For packaging purposes, DoD might request additional marks/information in the mark that vendors should be able to provide without difficulty, or significant expense.

Acquisition Cost - The amount, net of both trade and cash discounts, paid for the item.²



¹Marking - 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)

²aka Contract Price

³Automated Information System

⁴Based on sensitivity, safety, maintainability, failure tracking, or other critical traceability need