

# Appendix C - Business Rules (Version 3.5a)

---

## WHAT ARE BUSINESS RULES?

A Business Rule is a statement that defines or constrains some aspect of the business. It is intended to assert business structure or to control or influence the behavior of the business. Typical Business Rules include definitions of terms, facts relating terms to each other, constraints, and derivations.

## UID BUSINESS RULES

The following section includes the Business Rules for UID. The Business Rules for UID are divided into the following implementation categories:

- Contracts and Administration
- Accounting and Finance
- UID Construction and Physical Marking for:
  - Items considered part of a new solicitation after January 1, 2004 (i.e., New Items)
  - Items existing under contract or in inventory (i.e., Legacy Items)
  - Items considered tangible personal property owned by the Government in possession of a contractor after January 1, 2005 (i.e., Property Management Items)
- Automated Information System (AIS) Technical Interface

As the UID implementation progresses, the UID Joint Requirements Implementation Board (JRIB) fully anticipates that there will be additions to these Business Rules and possibly slight modifications. The UID Business Rules should be considered a work in progress that may not be finalized until the UID effort is fully implemented.

## **Contracts and Administration (DRAFT)**

1. Within the same Contract Line Item Number (CLIN), there is no need for a contractor to segregate the same items delivered against different Accounting Classification Reference Numbers (ACRN).
2. For FAR Part 12 contracts and subcontracts:
  - Use existing commercial marking, if available, or
  - The Government can mark the item, or
  - The Government can request the contractor mark the item.
3. Foreign Military Sales (FMS) contracts are not exempt from UID.

Additional items are still in progress.

## **Accounting and Finance (DRAFT)**

These items are still in progress.

## UID Construction and Physical Marking

### *Items considered part of a new solicitation after January 1, 2004*

#### Creating and Generating the Unique Identifier

1. The UID shall be derived from its discrete, component data elements. The UID is not required to be marked on the item as a separate data element.
2. If the enterprise chooses to mark the UID as a discrete data element on the item, the component data elements must also be marked on the item as discrete data elements, in addition to the UID.
3. Data qualifiers (semantics) will define each machine-readable data element marked on the item.<sup>1</sup>
4. If an enterprise serializes items within the enterprise identifier, the UID shall be derived by combining the following data elements, in order:
  - The issuing agency code (IAC), which shall be derived from the data qualifier for the enterprise identifier if it is not already provided
  - The enterprise identifier, which shall be marked on the item
  - The serial number, which shall be marked on the item  
(*Note: This is referred to as UID Construct #1.*)
5. If an enterprise serializes items within part numbers, the UID shall be derived by combining the following data elements, in order:
  - The IAC, which shall be derived from the data qualifier for the enterprise identifier if it is not already provided
  - The enterprise identifier, which shall be marked on the item
  - The original part number, which shall be marked on the item
  - The serial number, which shall be marked on the item  
(*Note: This is referred to as UID Construct #2.*)
6. The IAC shall be derived from the data qualifier for the enterprise identifier if it is not already provided. The IAC is not required to be marked on the item.<sup>2</sup>
7. A specific set of data qualifiers will identify which UID Construct should be used to build the UID or if the fully constructed UID is already marked on the item.<sup>3</sup>

---

<sup>1</sup> See the *DoD Guide to Uniquely Identifying Items* for a list of UID data qualifiers.

<sup>2</sup> See the *DoD Guide to Uniquely Identifying Items* for a list of IACs.

<sup>3</sup> See the *DoD Guide to Uniquely Identifying Items* for more details on these data qualifiers.

8. If UID Construct #2 is used, the enterprise must maintain the original part number on the item for the life of the item.
9. The enterprise is responsible for ensuring that the serial number is unique within the enterprise identifier (for UID Construct #1) or unique within the original part number (for UID Construct #2).
10. The enterprise is responsible for ensuring that the part number is not duplicated within the enterprise.
11. The UID will not change over the life of the item. Therefore, the component data elements of the UID will not change over the life of the item.
12. The enterprise identifier of the enterprise that assigned the serial number to the item is the only enterprise identifier in the UID machine-readable code that can use a UID data qualifier for enterprise identifier. Other enterprise identifiers may be contained within the machine-readable code as long as they do not use a UID data qualifier.
13. Data elements not required to construct the UID shall remain discrete but may be contained within the same mark or media as the UID-required elements, as long as all the data elements contained in the mark or media are properly identified with a data qualifier. The UID data elements should appear first in the sequence.
14. The UID component data elements, at a minimum, shall be contained in a Data Matrix ECC200 symbol, as required by MIL STD 130 L (or a later version).<sup>4</sup> Data may be contained in other AIT media (e.g., contact memory buttons, linear bar codes, radio frequency identification, etc.) in addition to the Data Matrix. The physical marks that contain the UID-required elements shall remain legible until the item is destroyed.
15. Where space is available, human readable information for UID data elements should be marked on the item.
16. High capacity Automatic Identification Technology (AIT) media shall utilize DOD-accepted syntax.
17. There are identification numbers used in the commercial sector that will be considered UID equivalents. UID equivalents shall comply with the UID Business Rule for minimum data carrier requirements.<sup>5</sup>

---

<sup>4</sup> See *MIL STD 130 L* (or a later version) for additional information on DoD-approved data carriers.

<sup>5</sup> See the *DoD Guide to Uniquely Identifying Items* for a list of approved UID equivalents.

## Metadata Requirements

18. The UID is a non-parsable field, not to exceed 78 characters in length. Overhead characters, such as syntax and data qualifiers, are eliminated from the string when the UID is constructed.<sup>6</sup>

- The IAC string of characters will not exceed 3 characters
- The enterprise identifier string of characters will not exceed 13 characters, excluding the data qualifier.
- The original part number string of characters (including special characters) will not exceed 32 characters, excluding the data qualifier.
- The serial number string of characters (including special characters) will not exceed 30 characters, excluding the data qualifier.
- The sum of the maximum number of characters for possible UID data elements is 78. The use of shorter field lengths is encouraged for part and/or serial numbers where feasible.

19. The UID string of data must have worldwide uniqueness (non-repeatable).

20. When constructing the UID:

- Any spaces contained in the component data elements will be deleted
- All special characters will be deleted from the enterprise identifier
- All special characters, except for dashes (-) and forward slashes (/) will be deleted from the original part number and serial number
- The UID may only contain uppercase English alphabet characters A through Z, numeric characters 0 through 9, and the special characters “-“ and “/”

## Capturing the Unique Identifier

21. For activities after initial delivery, in support of the product life cycle, any entity that collects data about the item must be capable of associating the data with the UID in accordance with program requirements.

22. If the symbol is unreadable, the human readable data qualifiers and data elements adjacent to the symbol shall be manually input to derive the UID using existing Business Rules.

23. Discovery of a duplicate UID will occur when the Government attempts to register the UID in its internal database. If a true duplicate exists, the

---

<sup>6</sup> This item is still under discussion, pending review by the UID AIS Technical Interface Working Group (TIWG) and the UID Joint Requirements Implementation Board (JRIB), which will coordinate with the Business Enterprise Architecture (BEA).

Government will work with the appropriate enterprise(s) to resolve the duplication.

24. In a database, once the UID is derived, it shall not be parsed to determine the original elements.
25. A database shall be capable of using the UID or the combination of its component data elements to retrieve the data record associated with the item represented by the UID.

### **Using the Unique Identifier**

26. The UID shall not be transferred from one item to another item once assigned and shall not be reused.

### ***Items existing under contract or in inventory***

27. If an item is missing data elements required to construct the UID, use the following Rules to create substitute numbers:
  - If the enterprise identifier is missing, use the enterprise identifier of the activity that will physically mark the item. The serial number must comply with Rule #9.
  - If the part number is missing or cannot be determined, obtain a part number from the in-service engineer or other appropriate authority.
  - If the serial number is missing, assign a serial number locally or centrally. In this case, the enterprise identifier for the item must be changed to represent the activity that assigned the serial number. The serial number must comply with Rule #9.
28. For legacy items that cannot be uniquely identified using UID Construct #1 or #2 or a UID equivalent (serialization was not unique within enterprise identifier or part number), re-serialization to conform to Construct #1 or #2 is preferred. Use of Construct #2A is permitted as an interim solution.<sup>7</sup>
29. If the original part number cannot be precisely determined, use the following method for establishing an original part number for the purposes of UID:
  - First, use the current part number at the time of acquisition, if it can be determined.
  - Second, use the current part number at the time the UID is created.
30. If the item is unidentifiable, a UID should not be assigned.

---

<sup>7</sup> The Construct #2A will be developed and included in the *DoD Guide to Uniquely Identifying Items*.

31. Once the contract is modified to include the UID requirements:
- If the contract is for delivery of new items to the Government, follow UID Business Rules for items considered part of a new solicitation.
  - If the contract is for support involving existing inventory items, the Program Manager will determine whether to follow existing Business Rules for new solicitations, items under contract, items in existing inventory, or some combination thereof.

***Items considered tangible personal property owned by the Government in the possession of a contractor after January 1, 2005***

32. Tangible personal property items owned by the Government in the possession of a contractor will use the asset identification number used to track the item as the item's serial number within enterprise identifier.
33. Tangible personal property items owned by the Government in the possession of a contractor will use the enterprise identifier of the enterprise maintaining the serial number of the item.
34. A UID should be created for tangible personal property items owned by the Government in the possession of a contractor by using UID Construct #1.
35. For items that do not require a UID:
- If the item is delivered with a commercial item mark, it is acceptable to the Government.
  - If an item is delivered without a commercial item mark, the contractor is not required to obtain one.
36. A UID is not required to be physically marked on tangible personal property items owned by the Government in the possession of a contractor unless the item is moved or delivered to a different location with a different enterprise identifier.
37. Tangible personal property initially furnished to the contractor by the Government will use the UID provided by the Government. If none is provided, establish a UID using the criteria in Rules 32-34.
38. Tangible personal property will also require markings or labels indicating Government ownership.

**Automated Information Systems (AIS) Technical Interface**

These items are still in progress.