

## **ANNEX C - PROCUREMENT TOOLS FOR UNIQUE IDENTIFICATION (UID)**

### **1. Unique Identification (UID) Marking Requirements:**

- a. For the purposes of this Unique Identification Marking Requirements clause, definitions shall be as follows:
  - (1) Automatic Identification & Data Capture (AIDC) - Methods of automatically identifying objects, and entering the identification data attributed directly into computer systems; without human involvement.
  - (2) Automatic Identification Technology (AIT) - Rapid and accurate data capture and processing technology for cognitive recognition, identification or verification purposes.
  - (3) Bar Code - A bar code is an optical machine readable representation of data, which shows certain data on certain items of supply.
  - (4) CAGE (NCAGE) - A unique identifier for manufacturers, suppliers, agencies and government departments.
  - (5) Concatenation - The joining of two or more strings of data end-to-end.
  - (6) Enterprise Identifier - Unique code assigned by the Issuing Agency to an entity (organization or group). The entity is the one that is responsible for ensuring the unique identification of all qualified items.
  - (7) Human Readable Interpretation / Information (HRI) - The interpretation of elements of the encoded bar code presented in a humanreadable form.
  - (8) Imaging Device - An AIDC device that recognises, captures and interprets encoded data through use of an image (Bar Code or Data Matrix symbol) scanned with a laser or other capable means.
  - (9) Issuing Agency Code - A code that identifies the Issuing Agency for the UII (defined in STANAG 2290).
  - (10) Machine Readable Interpretation/ Information (MRI) - The interpretation of the encoded bar code through use of an automatic data capture device.
  - (11) Recognized UII-Equivalent – Unique identification methods in commercial use that have been recognized by DND as UID equivalents. These are: Global Individual Asset Identifier (GIAI); the Global Returnable Asset Identifier (GRAI) when serialized; a vehicle identification number (VIN); and Electronic Serial Number (ESN) – used only when applied to cell phones.

- (12) Serial Number - A unique alphanumeric assigned for the purposes of identification, which varies from its predecessor or successor by a fixed discrete alphanumeric.
- (13) Unique Identification (UID) - A system of establishing unique identifiers to assets and other entities distinguishing it from other like and unlike entities.
- (14) Unique Item Identifier (UII) - A set of data elements that, when concatenated, form a globally unique and unambiguous identifier.
- (15) Unique Item Identifier (UII) Mark - Machine readable data carrier that contains the encoded data elements necessary to form a UII.
- (16) Unique Item Identifier Type - Designator to indicate which method has been used to uniquely identify an item.
- (17) Validation - The process for determining that the machine readable UII Mark contains the required information and has been encoded correctly with the proper semantics and syntax. Validation is performed using an electronic /optical imaging device capable of reading the UII Mark.
- (18) Verification - The process for assessing the quality of a machine readable UII Mark and assigning a grade to the results or otherwise indicating acceptance in accordance with the applicable specification or MRI protocol quality control document. Verification is performed using an electronic/optical verification device.

b. The contractor must:

- (1) Originate and assign Unique Item Identifiers or Recognized UII-Equivalents in accordance with STANAG 2290 to each of the following items delivered under the contract:
  - (a) Items identified by the Technical Authority as subject to serial management including:

Line Item(s)	NATO Stock Number
001	5985-99-383-3328
002	5985-99-956-8298

- (b) Any item not included in paragraph 1.b.(1)(a) of this section which the contractor supplies with a UII mark that was created and applied as a part of the contractor or their subcontractor's processes.

(2) Ensure the assigned Unique Item Identifiers or Recognized UII-Equivalents assigned in paragraph 1.b.(1) above:

- (a) Have been originated in accordance with STANAG 2290, using the component data elements as prescribed therein to allow production of a compliant UII Mark.
- (b) Are not duplicated on any other item marked by the Contractor;
- (c) Are not duplicated on any other item registered in the DND Item Unique Identification Registry;
- (d) Comply with the UII construction rules set out in STANAG 2290 Annex A;  
and
- (e) Do not exceed 50 characters in length in their concatenated form.

(3) Prepare and deliver Unique Identification (UID) Marking Specifications for Technical Authority approval consisting of the following:

- (a) Provide the following data for each Line Item in the contract which is subject to UID Marking:
  - i. Describe which type of marking methodology will be used (i.e., Direct or Indirect Part Marking, Data Plate Modification, etc.).
  - ii. Describe the Imprint Method / Type of Label / Nameplate (i.e., Chemical Etch, Dot Peen, Laser, Thermal Transfer, Ink Jet, Photo Etch, etc.).
- (b) Marking Specifications.
  - i. Identify applicable engineering drawings requiring UID marking.
  - ii. Machine Readable Mark Generation Instructions.
  - iii. Define the UID construct method.
  - iv. Identify format code, ISO/IEC syntax, and Data Qualifiers contained.
  - v. Identify the Enterprise Identifier (EID) (i.e. Cage, DUNS, or GS1).
  - vi. Identify the level of serialization (i.e., Part, Lot, Batch, Enterprise, etc.).
  - vii. If using Construct 1 – 18S, identify the sequence number generation process.

- viii. Determine other data elements (if required) in the data matrix symbol (i.e. 30P and 30T).
- ix. Identify the Human Readable Mark Generation elements to be included on the label.
- x. For labels/nameplates, identify which type of material will be used for the creation of the Mark (i.e., Aluminum, Polyacrylic, Metal Foil, Polyester, Polyvinyl, Aluminum Foil, Stainless Steel, etc.).
- xi. Describe the overall layout of the Mark including (Reference Tech Data as applicable).
- xii. Size (Length, Width, Thickness, etc.).
- xiii. Shape (Circle, Square, Rectangle, Rounded Corners, etc.).
- xiv. Layout/Order (Location of Human and Machine Readable elements).
- xv. Marking Location on Asset.
- xvi. Type of Lettering (Font, Font Size, Color, etc.).
- xvii. Attachment Method (Adhesive, Screws, Rivets, Tags, Bag and Tag, Tags and Bands, etc.). For Tag, and Bag/Band and Tag items, provide evidence of why part could not be marked and Government concurrence.

(c) Data File Format:

- i. The data must be delivered in “PDF” format.

(d) If DND has provided the Contractor with an approved UID Marking Specification for the item to be marked, the Contractor may use this specification to apply UID markings instead of developing a new UID Marking Specification.

(4) Prior to shipment of any UID-subject items, prepare and deliver a UID Data Submission for approval. The submission must include the following data for each UID-subject item:

(a) Description (English)\*

(b) Description (French)\*

(c) CAGE of item manufacturer\*

- (d) Manufacturer current part number\*
- (e) Manufacturer serial number\*
- (f) Item Weight  $\beta$
- (g) Unit of Weight †
- (h) Acquisition Value  $\beta$
- (i) Acquisition Currency†
- (j) Country of Manufacture  $\beta$
- (k) Year of Manufacture  $\beta$
- (l) Month of Manufacture †
- (m) Embedded item (Y/N)\*
- (n) NCAGE of parent item manufacturer (if an embedded item)†
- (o) Manufacturer part number (if an embedded item)†
- (p) Manufacturer serial number (if an embedded item)†
- (q) Unique item identifier of parent item (if an embedded item)†
- (r) Unique item identifier of item\*
- (s) Unique Item Identifier Type\*
- (t) Issuing Agency Code\*
- (u) Enterprise Identifier of entity assigning UII (if concatenated UII is used)†
- (v) Item Original Part number (if UII is serialized within the part number)†
- (w) Item Lot or Batch Number (if UII is serialized within the batch or lot)†
- (x) Serial number used in UII (if concatenated unique item identifier is used)†
- (y) CAGE or DUNS of organization submitting the data\*
- (z) Name of the person or office submitting the data\*

- (aa) E-mail address of the submitter\*
- (ab) Phone number of the submitter\*
- (ac) Contract Number under which the item is to be delivered\*

### NOTES

- (\*) indicates a Mandatory Field
- (β) indicates an Optional Field
- (†) indicates a Conditional Field

### NOTES

The data must be delivered in a “.CSV” or “.XLS” format

For questions related to the data submission or to obtain a data submission template, please contact: [UniqueIdentification-IdentificationUnique@forces.gc](mailto:UniqueIdentification-IdentificationUnique@forces.gc).

- (5) Upon approval of proposed Unique Item Identifiers, mark each UID-subject item with:
  - (a) Its Unique Item Identifier component data elements (as approved in 2.d above), using an ECC200 Data Matrix Symbol in accordance with AAITP-09 and STANAG 4329;
  - (b) UII Marks applied in accordance with approved UID Marking Specifications (as described in section 2.c of this clause);
  - (c) UII Marks that conform to the syntax and semantics described in STANAG 2290 Annex B, Para 4;
  - (d) UII Marks having a minimum Symbol Quality as described in STANAG 2290 Annex B Para 5; and
  - (e) UII Marks that are accomplished in a manner that will not adversely affect the item’s ability to meet its required performance.
- (6) Ensure that any UID-subject items that are delivered in unit-level and bulklevel packaging for which said packaging obstructs access to the item UII Marks have UII package labels that:
  - (a) Have been applied on the outside of the package with UII information in a machinereadable PDF417 bar code symbol which contains the UII (unit-level) and UIIs (bulklevel) contained within said package, as applicable;

- (b) Utilize a PDF417 packaging symbol is in conformance with STANAG 4281 / AAITP-05; and
- (c) Utilize syntax and semantics in conformance with STANAG 2495 / AAITP-03;

**NOTE**

The PDF417 label containing the UII data must be either part of the other required packaging labels set out in this Statement of Work, or affixed as a separate label adjacent to the other required packaging labels.

- (7) Prepare and deliver a UID Validation and Verification report in accordance with the following:
  - (a) A representative sample of UII marks on items for each distinct UID applicable item type procured shall be verified. Verification for mark quality of the first article for each item type is required. Each UII mark shall be validated for data contents. Verification and validation results shall include at a minimum the data set out in 10.4 below (with exception of Verifications). Marks failing verification or validation must be replaced with compliant marks prior to acceptance of the items.
  - (b) The tabular report shall include the following alphanumeric fields:
    - i. Unique Item Identifier (UII).
    - ii. UII Type (Construct).
    - iii. Enterprise Identifier (EID).
    - iv. EID Type (CAGE/NCAGE, DUNS, etc).
    - v. Original Equipment Manufacturer (OEM) Part Number.
    - vi. Service Assigned Serial Number (if assigned).
    - vii. Original Equipment Manufacturer (OEM) serial number.
    - viii. Equipment Nomenclature (name and type).
    - ix. NATO Stock Number (NSN).
    - x. Validation Date.
    - xi. Validation Result (Pass/Fail).

- xii. Verification Date.
  - xiii. Verification Result (Pass/Fail).
  - xiv. Other Event/Activity Date\* (optional).
  - xv. Other Event/Activity\* (optional).
  - xvi. For items marked that “Fail” IUID validation or verification, identify corrective action (whether the item has been re-marked or scrapped).
- (c) A “Pass” validation value shall be assigned to records whose data matrix symbol(s) properly encode Item Unique Identification data as prescribed in STANAG 2290 requirements for machine readable information (MRI) marking.
- (d) A “Pass” verification value shall be assigned to records whose data matrix symbol(s) meet or exceed the Symbol Quality standards set out in STANAG 2290 for data matrix symbol quality. These must be accompanied with a detailed Verification report for each mark that was verified.
- (e) The Contractor shall ensure machinereadable UII marks required under this contract are permanently placed on the items subjected to contractually-required performance testing prior to that testing; and further shall include all mark serviceability problems in the item’s test report(s).
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