

# Develop a QA Process for UID Verification and Validation

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Don't take it on faith that the labels and plates you accept from your label supplier, sub or prime contractor are appropriate for the lifecycle of the item intended and contain the correct information. At the end of the day it is you, the contractor or the military receiving agent who is responsible for the information that gets uploaded to the IUID Registry. You can have a beautiful label that contains incorrect data, and you can have a label that is perfectly encoded with correct data but has poor print quality or is of the wrong material to withstand the rigors of use.

A carefully developed quality assurance program is the best insurance against eleventh-hour fire drills such as labels that won't adhere, product that is rejected and incorrect data that becomes worthless downstream.

We often encounter confusion between the two "v" words, verification and validation. A simple way to remember the difference is to think of it this way: verification = penmanship while validation = spelling. In other words verification is about the external quality of the mark and its appropriateness for the application. Validation is about the data that is encoded in the mark, the format and syntax.

Quality Assurance best practice will vary somewhat, depending upon your role in the UID process. Below are A2B's suggestions, based upon our experience with hundreds of UID practitioners at each level.

## **If you create labels and plates internally:**

It may seem self-evident, but the first step in creating IUID marks is a thorough understanding of each item's physical characteristics as well as the usage and environmental characteristics to which it will be subjected throughout its lifecycle. For example, if you are creating marks for items that are likely to be subjected to high abrasion, it is necessary to choose appropriate marking material. This may require some field testing.

Once the proper material is selected, best practice dictates utilizing appropriate tools available to ensure success. These include UID data management software to create the marks along with a verifier which will also validate those marks. Some organizations try to generate marks without UID data management which is like trying to walk a high wire without a net. One mistake could be catastrophic. Imagine that an item gets marked with incorrect IUID pedigree data. That mark slips through your quality control process and is shipped overseas with an incorrectly encoded UID. What's worse is that the item with its incorrect data is registered to the IUID Registry. We have witnessed organizations spend thousands of dollars in "undoing" the IUID Registry submission, literally sending personnel overseas with the correct label to apply to the incorrectly marked item.

It is also best practice to verify and validate each mark before affixing it to the item. Use the verifier to ensure that you have produced an "A" grade label. This is the best way to ensure that the label will scan throughout the lifecycle of the item. The verifier will also validate that the labels contain the correct data, in the proper syntax.

## **If you receive IUID labels and plates from outside vendors:**

Again, it goes without saying that you must order the appropriate material for the intended item(s). The onus is on the label or plate supplier to deliver grade "A" labels and plates that have been validated for proper syntax. To that end, you may request a certificate of verification and validation, which means a percentage of the marks, specified by you, has passed inspection. Even with that assurance, best practice when receiving an order is to spot scan to verify label quality and to validate proper syntax. Free web-based validation software is available through <http://validator.uidcomply.com> which, at a minimum, checks that the syntax is valid.

Remember, you are responsible for the accuracy of those labels and plates, even when they are manufactured by someone else. If you don't properly control the quality of the marks, you will be the one to feel the consequences.

## **If you are a prime contractor receiving UID marked items from subs:**

As a prime contractor best practice dictates that your sub-contractors are required to mark all deliverables in full compliance with MIL STD 130. The sub creates or purchases appropriate labels and plates as described above, with the added requirement to report data for each item to the prime. Ideally this data transfer should be accomplished by utilizing the same IUID data management software as the prime. Without proper data management transfer, there is no ability to upload data to the IUID Registry or to utilize the data downstream, for maintenance and inventory control, for example.

Ultimate responsibility for MIL STD 130 and DFAR compliant items reaching the IUID Registry rests with the prime, so it is incumbent upon the prime to set up QA checks when receiving items from a sub. This would involve scanning to receive every item with validation software. As prime you need to know that the data is "spelled correctly" and that all the required data is included in the mark. Failure to implement this QA check may result in deliverables that are rejected by the WAWF and a costly delay in contract fulfillment.

**If you are the military receiving items:**

New items received by the military have already been accepted into the wide area workflow (WAWF) so it can be assumed that earlier QA practices were observed. This leaves the task of marking legacy equipment and the harvesting of data for upload to the IUID Registry. In this instance labels and plates may be purchased from a vendor or created with UID data management software. The same QA best practice rules apply. When engaging in seek and apply marking, a strict protocol should be followed, and mobile computing is often most practical for field work.

**What's the point of a bad mark?**

It cannot be stressed enough: The whole point of UID is ready access to accurate data. That data then becomes available for a whole host of scenarios including inventory management, maintenance oversight, logistics decision making and beyond. The efficiencies of UID are limited only by the imagination. Those efficiencies start with a usable mark that can be identified in a database and scanned into legacy databases and systems such as ERP.

Ultimately UID data is used to save warfighter lives. Imagine a military aircraft in regular use. With that aircraft's component UIDs accessible in the IUID Registry, maintenance depots can query the Registry and track each part's repair history to isolate problem parts for retirement and/or replacement by the contractor. When replacement parts are required, a query to an inventory control system will show their nearest location. If replacement parts are unavailable and the aircraft is deemed unsafe for use, the UID can be used to locate the necessary component and configuration from a substitute aircraft.

Good quality assurance practices are the foundation of good data. Bad data is not only useless, it is potentially life threatening.

Courtesy of A2B Tracking Inc.

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