a2b TRACKING SOLUTIONS

UID QUARTERLY: SPRING 2010

INTRODUCTION

Welcome to the UID Quarterly Spring 2010 Edition, brought to you by A2B Tracking Solutions as an educational service. We think you will find a great deal of practical and useful information here. Read each article carefully and then pass along the Quarterly to a friend or colleague who could benefit from reading it.

What you'll find in this issue:

Opinion - Randy Koram, Air Force IUID Program Manager in the AF Automatic Identification Program Management Office, summarizes how the Air Force is using IUID marking activities as a means to "clean up" existing records in order to maximize IUID rewards.

GSA Advantage!®
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UID Solutions - Do you have a quality assurance program for the IUID verification and validation process? Read this to understand why that is so important.

UID Success - What unique IUID challenge are you facing? We share complex challenges our users have faced in implementing IUID, along with some lessons they have learned along the way.

UID Education - Check out the upcoming UID web seminar dates presented by David Collins of Data Capture Institute.

News from A2B Tracking - Read all the latest from A2B.

OPINION

IUID Data Management of AF Legacy Asset

The Air Force has fully embraced the DoD IUID mandates to mark qualified legacy assets. However, our intent is to go beyond the published mandates and really get the payback from IUID by leveraging the benefits in our business process to cut costs and increase availability of our weapon systems and end items. Therefore, we not only want to mark assets, but we want to ensure we get the data piece right. Our impetus is the development and fielding of our ERP; the Expeditionary Combat Support System (ECSS). Currently, we have many AIS populated with, simply put, bad data. Many of the capabilities and the data in these systems will eventually be subsumed into ECSS. As we continue on our IUID journey, we are using marking activities as a way to "clean up" records in these systems so we can populate our ERP with data that will actually help us truly reap the rewards of IUID.

We have many on-going marking efforts in the retail and wholesale environments to affix UIIs to our legacy assets; and while we're marking a number of items, our registration effort has been slow. In fact, we've registered data on less than 50% of the items we've marked. Why is that? Well, in large part due to our meticulous attention to details in ensuring the data is correct. We're employing a labor

intensive process of looking at every record destined for the DoD IUID Registry and the AF IUID Data Base. Obviously this is an unsustainable model; but our goal is to hand massage these early records, identify issues and resolve them in a systematic way. In the end, we hope to identify the process, training and systems issues driving the delivery of bad data; and to correct these issues at the root level. So what are some of the data management challenges?

The most troubling is the potential assignment of multiple UIIs to the same item. Based on manufacturer pedigree data (CAGE, part number, and serial number), there appear to be multiple UIIs being assigned to the same underlying asset. With the future vision being the management of the Air Force's high value/high criticality items using UIIs, the assignment of multiple UIIs to the same item creates 'ghosts' that could inflate inventory in terms of the count of available assets and the valuation of items owned by the Air Force. Alternately, it is possible that OEM

serialization techniques for items delivered to the Air Force prior to IUID implementation did not ensure uniqueness. This was demonstrated during the physical marking of a serially managed aviation item. Within a population of approximately 1,044 total instances of the item, eleven sets of assets were found to have the same serial number assigned by the manufacturer.

The risk of assigning multiple UIIs is heightened by the use of virtual UIIs. A virtual UII is a UII where the UII and associated pedigree data is registered in the DoD IUID Registry, but no physical mark is placed on the item. Without a physical mark, there is no obvious indication a UII has been assigned, which may prompt the assignment of a second UII under the assumption that the item has not previously been registered in the DoD IUID Registry.

Another issue concerns leading zeros within serial numbers. Current logistics information systems may add or remove leading zeros to serial numbers based on how the information system stores data. When associating a UII with an item, it is imperative that the serial number assigned by the OEM be accurately recorded with the appropriate number of leading zeros. The most effective way to do this is by having the item being uniquely identified co-located with the IUID marking activity where the association between the item and the UII is being created so the IUID marking activity may record the OEM pedigree data already marked on the item. However, this may not always be feasible requiring additional care in recording and transmitting OEM pedigree data to the IUID marking activity. When the issue concerning leading zeros interacts with the issue concerning potential assignment of multiple UIIs, the adverse affects are compounded.

We are approaching management of IUID legacy data diligently. The goal is to glean maximum value from the mark and to ensure we subsume clean data into our ERP. With over 13M legacy assets spread across the world at over 230 major installations and total force bases; data management represents a significant challenge, but one we are prepared to resolve.

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Randy Koram is the AF IUID Program Manager in the AF Automatic Identification Program Management Office. In this capacity he oversees activities and planning to mark and manage data on the AF inventory of over 13M legacy assets worldwide. Mr Koram is a career logistician and has served over 25 years in the AF on active duty and as a government employee. He has worked across the logistics spectrum, holding positions both in the retail and wholesale logistics environment in government as well as in the private sector.

OPINION

IUID Data Management of AF Legacy Asset

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.

Verification = Penmanship
Result is a grade based upon the quality of the IUID mark.

Validation = Spelling
Result is pass/fail based upon encoding of the IUID mark.

Quality Assurance best practice will vary somewhat, depending upon your role in the IUID process. Below are A2B's suggestions, based upon our experience with hundreds of IUID 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.
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Once the proper material is selected, best practice dictates utilizing appropriate tools available to ensure success. These include IUID data management software to create the marks along with a verifier which will also validate those marks. Some organizations try to generate marks without IUID 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 IUID. 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 IUID 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 IUID 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 IUID 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 IUID 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 IUID data is used to save warfighter lives. Imagine a military aircraft in regular use. With that aircrafts' component IUIDs 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 IUID 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.

UID SUCCESS

Here at A2B we have worked with hundreds of DoD contractors and military installations since IUID was first introduced back in 2003. If there is a common theme among them, it is that each feels they have a unique challenge making their entry into IUID compliance particularly complex.

While that is true (indeed each situation is unique) it is equally true that the problems they describe tend to fall within predictable parameters. In this article we will shed some light on several of those challenges and reveal how complex problems were solved. We will also share some lessons our users learned in the process. In reviewing these stories you will likely come across situations that sound much like your own.

ASFTASFT (Advanced Systems for Tomorrow)
The challenge of handling multiple asset categories, with some deployed

The Situation The ASFT office in Newport, RI was contracted to provide value-added, third-party logistics for two US Navy submarine electronics systems. This involved IUID implementation for government furnished property (GFP) during the process of kitting as well as marking and registering of deployed legacy equipment for the Submarine Communications Program Office. ASFT warehouses some 50,000 individual items that had to be IUID marked as they were received or when cycle counted. In addition items on deployed submarines had to be marked with Virtual UIIs until physical marking became possible – a time-limited, sporadic effort when the ships are in port.

The Solution Technical Area Manager for Product Integrity Rick Gartmayer and his team established internal workflow rules for item categories (GFP and legacy). This is particularly important when large parent items filled with embedded electronic parts are brought in for re-kitting. Here is how that is handled: When assets are drop shipped from vendors or the Navy customer they are considered GFP. During the internal workflow - kitting for ships, for example, the assets carry a hybrid designation, GFP/legacy. Once they leave ASFT they are registered as legacy.

ASFT personnel carefully inspect every child item within a parent to determine which are reparable, which are usable as spares, which will be reconfigured within the parent and which will be scrapped. Once that determination is made, IUID labels are printed, verified, validated and then scanned into the IUID Registry. The teams also worked together to establish protocols for both seek-and-apply and opportunistic marking methodologies for deployed items. UID Comply!® data management software is utilized to drive a Zebra 105SL thermal transfer printer and a Microscan verifier. “Our initial objective was to find a single system provider,” says Gartmayer.

Lessons Learned Gartmayer has the following advice for others: Go slowly and get it right the first time. Understand your requirements as well as those of your customer before selecting an implementation solution. Work with a vendor who knows IUID completely and will support you through a complete solution. Understand that IUID is far different from earlier tagging.

NAVSEA CraneNAVSEA Crane Division
The challenge of managing IUIDs across remote sites

The Situation Crane Division* serves as an acceptance agent for three critical parts to an advanced combat system. Some repairs are also made to those parts. In order to perform these tasks, Crane Division has developed specialized test sets, composed of numerous pieces of test equipment. Duplicates of these test sets are located in the parts manufacturers’ facilities, but all test sets are under Crane’s control. Crane’s IUID plan had to encompass parts deployed around the world as well as the test set components, regardless of location, and parts as they flow through Crane for acceptance or repair.

** The facts in this case study are accurate. The identity of the program is not revealed for security reasons.*

The Solution Once he understood the scope of what was required, Crane contractor Charlie Rogerson made a conscious decision to utilize one company, with one solution. “I did not want to have to integrate all the pieces myself,” he says. After implementing our data management software, labeling the existing parts in his possession then became an efficient, straightforward

process. Marking of new end item deliverables was pushed down to the manufacturers, while legacy items were readily identified by querying the combat system's parts database. Virtual UIIs were created for thousands of parts that are deployed around the world. UID Comply!® data management software was chosen to create and manage these Virtual UIIs, from creation to uploading to the IUID Registry.

Lessons Learned Rogerson says, "Become educated so you know what questions to ask... When I buy a car I don't want to put on the right fender and then the left and then all the other pieces, hoping they will eventually work together. In my experience it is a lot less expensive to buy a system, built by experts to work as a system, rather than to buy parts and try to get them to work together."

TCOM, LPTCOM, L.P.
The challenge of deploying IUID with configuration management

The Situation In order to fulfill a US Army contract as a sub-contractor to Raytheon, TCOM was required to become IUID compliant, meaning that some 300 embedded items within each aerostat they manufacture had to be serially labeled and registered in order to comply with MIL STD 130. Due to the complexity of the aerostat system and the large number of LRUs (lowest repairable units) revision control is of utmost importance. "Our need for configuration management is not outweighed by our need for IUID compliance," says Lead Production Planner Bryan Peiffer. "We had to find a method of marking with both IUID and revision level in order to meet the needs of both, a requirement that seemed overwhelming."

The Solution Peiffer called on A2B's IUID experts to come onsite and analyze the problem. With A2B's analysis and support, TCOM decided to use label Construct 2 to incorporate the old item tracking number along with the new IUID. The label also carries the TCOM logo and human readable information for personnel in the field who may not have access to a database. Polyester labels were chosen after rigorous testing for pliancy and durability in extreme temperatures. TCOM uses UID Comply!® data management software linked with BarTender® enterprise software from Seagull Scientific. The UID Comply!-controlled solution also incorporates Microscan Verifiers and Zebra 105 SL Thermal Transfer printers.

Lessons Learned Peiffer's advice is to take time to understand what is required, how your IUID implementation is going to be accomplished and how that will impact other systems.

Oldenburg GroupOldenburg Group Incorporated
The challenge of meeting MIL STD 130 mark requirements in any environment

The Situation A military contract for a causeway system required compliance with MIL-STD-130. Numerous items needed to be marked, serially managed, and registered with the IUID Registry, including items of widely differing materials that would be subjected to harsh and abrasive environments. Four days after labeling with polyester labels (highly recommended by a well known IUID supplier) the in-house DCMA (Defense Contract Management Association) representative made an inspection. "To our horror the labels flicked right off, with just a light scratch test," says UID Compliance Specialist, Susan Boulden. "We really had a dilemma! The labels were not sticking; the customer and railroad were waiting for us to ship and we were being charged daily for the delay."

The Solution Boulden then utilized A2B's resources for extensive label and plate testing on the stainless steel safety plate, where the IUID mark would be applied. The best solution for the heavy equipment was a small, pre-drilled, anodized, stainless steel plate. A durable adhesive label was chosen for equipment in more protected environments. All the marks arrived from A2B with a Certificate of Compliance, and immediately passed DCMA inspection.

Lessons Learned Boulden says, " I learned the importance of doing research before deciding on your supplier. That turned out to be the biggest part of my education… Just because a supplier says they know about IUID doesn't make it true."

Get the full story
To read these case studies, and others, in full. Complex IUID scenarios abound, and highly intelligent professionals are finding solutions to unique situations every day. If you have a story you would like to share with our readers, please contact the UID Quarterly editor at jhacker@a2btracking.com

UID EDUCATIONAL WEB SEMINARS

Data Capture InstituteIn our quest to provide ongoing education to those who are implementing IUID and RFID we offer the following seminar series:

IUID Web Seminars from Data Capture Institute
David Collins, President of Data Capture Institute, has been engaged by A2B to present a series of IUID Web Seminars as a non-commercial, educational service to those who are required to implement IUID.

David is considered by many to be the “father of the bar code industry” having led the original bar code project, KarTrack, for Sylvannia in the early 1960s and later, in 1968, founding Computer Identics Corp, the first company to design and manufacturer commercial bar code scanners. Over the years Collins and his team have overseen thousands of bar code installations around the world. He is author of the popular 1992 book, “Using Bar Code – Why It’s Taken Over” and is a frequent keynote speaker and automatic data collection seminar presenter. As a member of the UID integrated product team (IPT) he is uniquely qualified to respond to the questions and concerns of companies of all sizes, including large, multi-national enterprises as they grapple with UID implementation.

Upcoming UID Web Seminar Dates
(Presented each day at 2:00 Eastern)

Thursday, June 3
Thursday, June 17
Tuesday, July 13
Tuesday, July 27
Tuesday, August 10

To register for any of these dates, email pchasse@a2btracking.com or click on this link: http://www.uidsolutions.com/webinar_signup.aspx

NEWS FROM A2B TRACKING:

Latest Press Releases:

April 22, 2010 - A2B Tracking Solutions Releases UC Web!™ IUID Compliance Solution – PORTSMOUTH, RI - UID Comply!® Product Manager Jim Daniels has announced the release of UC! Web™. Leveraging the full IUID data management functionality of A2B's UID Comply!® software, UC! Web satisfies the need for web-based, browser-accessible IUID data management software. (read more)

March 22, 2010 – US Marine Corps Wins IUID Legacy Team Award – PORTSMOUTH, RI - A2B Tracking Solutions Inc. has learned that one of its top customers, The US Marine Corps, has been recognized by the Department of Defense for their leadership role in marking legacy equipment, in accordance with MIL STD 130 requirements for unique serialized asset tracking. (read more)

March 17, 2010 - US Air Force Team Wins Department of Defense Award at UID Forum - PORTSMOUTH, RI - A2B Tracking Solutions Inc. was named in the coveted Team Excellence Award presented during the UID Forum last month in San Antonio. The honor was in recognition of A2B's efforts in support of the US Air Force – Nuclear Weapons Related Material. (read more)

March 5, 2010 - A2B Tracking Hosts UID Comply!® User Meeting at UID Forum -PORTSMOUTH, RI - A2B Tracking Solutions Inc., the leader in enterprise-wide IUID compliance software and services hosted 50 UID Comply! data management and registration software users at a breakfast meeting during the recent San Antonio UID Forum

A2B Travels

National Property Managers Association National Education Seminar June 14-17, Myrtle Beach, SC

Stop by A2B booth #29 at this important annual event and plan to attend A2B President Peter Collins' workshop - "IUID – What you need to know" on Wednesday, June 16th

UID Forum

207 HIGHPOINT AVENUE, PORTSMOUTH, RI 02871
TEL: 800-733-7592 | 401-683-5215 | FAX: 401-683-5219 | WWW.UIDSOLUTIONS.COM