



UID QUARTERLY: SUMMER 2009

INTRODUCTION



Welcome to the UID Quarterly Summer 2009 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 - Rick Triviso, Marine Corps Systems Command's IUID Legacy Program Team Leader, describes the program undertaken by the Marine Corps Systems Command Product, Group 9, Operational Forces Systems, to mark mission essential legacy ground equipment - over 200,000 items.

UID Success - Advanced Systems For Tomorrow Inc., ASFT has achieved success with the IUID Program they have undertaken for two US Navy submarine electronics

systems. The contracts include IUID implementation for government furnished property (GFP) for Naval Sea Systems Command Submarine Combat Systems as well as the task of tagging and registering deployed legacy equipment for the Submarine Communications Program Office.

Vendor's Corner - Zebra Technologies makes the case for thermal transfer printing of IUID labels.

UID Education - View a full schedule of IUID Web Seminars, sponsored by A2B Tracking and hosted by Data Capture Institute President and bar code pioneer David Collins.

News From A2B Tracking - Read all the news and announcements from A2B.

OPINION

IUID Meets Legacy

By: Rick Triviso, PG09/MCSC/USMC IUID Legacy Program Team Leader



The United States Marine Corps (USMC) is actively moving out on DoD's directive to mark Legacy equipment across the Services. The Marine Corps Systems Command (MCSC) Product Group (PG) 09, Operational Forces Systems, has initiated a program to mark Mission Essential Legacy Ground Equipment. The inaugural Phase I, consists of 245 Table of Authorized Materiel Control Numbers (TAMCN) and over 200,000 Principal End Items (PEI) and identified associated assemblies/sub-assemblies, i.e., Secondary Repairables (SECREP).

The execution of this Legacy Program involves the development, staffing, equipping, and deployment of Mobile Marking Teams (MMTs) to each of the Major Commands, starting with Marine Forces Pacific Command and III Marine Expeditionary Force (MEF). This effort required the launch of a collaborative and coordinated team environment. The team made up of many parties, to include: General

Dynamics Information Technologies/Claxton Logistics Services, United States Air Force's Enterprise Barcode Service – Unique Item Identifier (UII) labels; A2B equipment & support; and pilot UII marking efforts (small weapons).

Benefits of implementing an IUID program are numerous and multifaceted. The majority of these benefits stem from the capability to

utilize fully automated systems, achieved through the data inherent to the execution of an IUID program. Automation provides increased data quality via a reduction in manual entry and transcription errors, and improved item and asset visibility across functional areas and multiple databases via decreased administrative error and processing time. The result is a greater degree of confidence and trust by decision makers across the Marine Corps.



Corporal Bryan McLain scans the weapon's IUID label at The Basic School Armory on Marine Corps Base Quantico, Va.

Many steps and processes are critical to this Legacy Program. The program started with the collection, documentation, and validation of pedigree data collection for each of the PEIs identified for marking during Phase I. The second step in the process: Engineering Analysis, served as a critical element as it identified mark location, type, size, and adhesive requirements.

A Market Research/Analysis was conducted to look at what industry could provide in the way of lasers, scanners, verifiers, and integrated marking equipment solutions. Requirements for scanners, verifiers, lasers, and label types and adhesives were developed, and identified the need for an Integrated Marking Cart (IMC) to successfully support the mobile marking efforts. The IMC is made up of a laser, scanner, verifier, and operating software. Requirements were established to ensure the IMC selected would meet all of the functional capabilities in various remote locations. Requirements identified included: operational, functional, performance, use and feel, environmental, and throughput capacity. A2B's IMC was selected via MCSC/GSA acquisition process. Since the award, A2B has exemplified the essence of team work and provided MCSC with phenomenal service and support. In addition to the timely delivery of the IMCs, A2B also provided on-site training on the equipment and software for the MMT.

The III MEF Mobile Marking effort is currently underway. Once marked, the Ull will be registered in the DoD IUID registry. An important follow-on step to IUID marking of the equipment is the storage and management of all IUID data. This will be done via the USMC Temporary Data Storage (TDS) and repository until the new Marine Corps Global Combat Support System (GCSS- MC) becomes operational.

Coordination required for integration of IUID efforts throughout the Marine Corps for the marking of legacy ground equipment, registering the Ulls, and incorporating of the data into USMC AIS and GCSS-MC dictates an office of primary responsibility to be established. PG 09 is this office for the USMC. PG 09 will coordinate with HQMC Deputy Commandant, I&L to identify funding requirements to support the IUID Legacy ground equipment marking program as well as moving forward to marking ALL USMC Legacy types of equipment, i.e., controlled/serial item management items, etc..

Moving beyond current policy will further position the USMC to reap the continued and proven benefits of IUID and its associated business processes: increase data quality

across functional areas—once fully automated, supply and maintenance personnel in the Fleet Marine Force (FMF) will see improved item visibility across databases—and a corresponding decrease in administrative errors and a reduction of processing time. IUID provides a critical common link between total life cycle management, sense and respond logistics, and network centric warfare. This is very good for the Marine Corps.

As the MMT deploys and commences marking at III MEF, lessons will be learned and modification requirements will be identified and addressed.

Paramount to future success is the establishment and continuation of a collaborative and coordinated environment for the entire team. Our Legacy Program has proven this, and we'll continue to refine our processes, equipment, software, and teamwork in order to execute at the highest level of success.

Rick Triviso (right) Marine Corps Systems Command's IUID Project Lead, points out the weapons IUID label to Lance Corporal Robert Dauman.

About the Author

Rick Triviso is a government civilian working for the Marine Corps Systems Command, Product Group 9, Operational Forces Systems, He is currently the Project Lead for the IUID Legacy Ground Equipment Program. Mr. Triviso is leading the effort to meet DoD's IUID requirement

to mark all legacy equipment by 31 December 2010. The IUID Legacy Program will IUID mark all of the Mission Essential Legacy Ground Principal End Items (PEIs), and designated associated Secondary Reparable (SECREPs), currently inventoried at USMC Major Commands: I, II, & III MEF. He also served for thirty years in the United States Marine Corps as an active duty Chief Warrant Officer (CWO) 5, as an Engineer and Utilities officer.



Rick Triviso (right) Marine Corps Systems Command's IUID Project Lead, points out the weapons IUID label to Lance Corporal Robert Dauman.



UID SUCCESS

The Company

Advanced Solutions for Tomorrow, Inc. (ASFT) is a service business, based near Atlanta, with a diverse base of clients including Department of Defense agencies and contractors, Fortune 1000 companies, state and local governments, and small commercial businesses. ASFT services include the following:

- Product Integrity
- Program Support
- System Engineering
- Multimedia Development

The ASFT office in Newport, RI has been contracted to provide 3PL (third party logistics), value-added contract logistics for two US Navy submarine programs, specifically the submarine electronics systems. The contracts include IUID implementation for government furnished property (GFP) for Naval Sea Systems Command Submarine Combat Systems as well as the task of tagging and registering deployed legacy equipment for the Submarine Communications Program Office.

The Situation



With these contracts Rick Gartmayer, Technical Area Manager for Product Integrity, and his team found themselves centered in an IUID bull's eye. With capabilities that include web-based workflow from requisition through fulfillment, kitting assembly for components and spares, technology insertion, obsolescence management and management of component repairs, assets requiring IUID labeling move through their facilities on a daily basis.

Since IUID per MIL STD 130 is relatively new, Gartmayer found that education was required all around. "We found that we were engaged in a dual learning experience with our customer (the Navy)," he says. "There were many decisions to be made, particularly with regard to marking criteria. We had some deer-in-the-headlights moments until we were able to settle on operational and logistical requirements."

The two submarine programs require IUID marking of warehouse components and deployed equipment. For perspective, ASFT warehouses over 50,000 individual items that are IUID marked as they are received or when they are cycle counted, and there also is wholesale marking of priority items. Both "seek-and-apply" and "opportunistic" marking methodologies are utilized.

Items that are IUID marked and registered fall into one of three categories: government furnished property (GFP), legacy equipment and end item deliverables. The latter concerns manufacturers of equipment and is not a large part of the ASFT story. Gartmayer and his team walk a fine line when distinguishing between GFP and legacy categories, however, and so they developed the following internal rules: 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.

When ASFT personnel go on board submarines for "seek-and-apply" marking of legacy equipment, accessibility is their greatest challenge. First, they must physically locate items as well as embedded items and then there is the matter of a ship's deployment schedule. Another challenge is to determine the accuracy of existing configuration records, a sorting out process. Given the limited time available for access between deployments, many items must be registered as virtual UIIs which are confirmed, marked and their status changed to "marked" at the next opportunistic trigger event. "We received a whole lot of help from A2B in working out the process," says Gartmayer. "They were terrific."



They also worked closely with the Navy to determine "end-of-life" criteria, something Gartmayer describes as a very fluid, case-by-case process. Decisions had to be made on what items will be refurbished, which will be scrapped and what embedded items have a longer life cycle than their parent items.

(Continued)

The Solution

The ASFT team chose UID Comply!® Pro data management software from A2B Tracking Solutions as the engine for the IUID compliance effort. UID Comply! Pro drives a Zebra 105SL thermal transfer printer to produce polyester IUID labels. It also enables a Microscan UID LDP verifier. Thermal transfer printing and polyester labels were recommended by A2B and chosen for their durability and permanence on the electronics components. Gartmayer says, "Our initial objective was to find a single system provider...A2B was definitely the right decision in terms of technical superiority, financial investment and customer support."

When A2B visited ASFT to prepare this case study large electronics cabinets, called buckets, were lined up and down the warehouse floor. They make an excellent illustration of why IUID is necessary. The buckets, which the Navy intends to redeploy, house dozens of electronic components. In IUID parlance, the buckets are the parent asset and the components are the children. It is up to the experts at ASFT to determine which components are still useful and which are obsolete. Prior to IUID, parent assets such as these buckets were sometimes cannibalized for spare parts, the result being that parts were sometimes missing, and there was no way of pinpointing their whereabouts.



Here is what happens now: ASFT personnel carefully inspect every item within the buckets to determine which are repairable, which are usable as spares, which will be reconfigured within the bucket and which

will be scrapped. Once that determination is made, an IUID label is printed, verified and validated for every item. The labels are scanned and the information is uploaded to the IUID Registry. IUID is carried out alongside ASFT's new warehouse management system (Accellos Enterprise 3PL),

so although the internal WMS and the Registry are totally independent, both represent total asset visibility and just-in-time readiness.

Some Advice

Those Navy contracts caused the ASFT team to become IUID proficient. Now that they understand the requirements of MIL STD 130 and the logistics of complex applications, they are enthusiastic about the value added. As supply chain and logistic experts they are quick to grasp the efficiencies that are popping up everywhere. Gartmayer's advice for others can be summed up as follows:

Understand both your customer's and your own requirements before selecting an implementation solution.

Work with a vendor who knows IUID completely, and will support you through a complete solution.

Go slowly and get it right the first time.

Seek education before making crucial decisions. UID Forums are very helpful.

Understand that IUID is far different than earlier tagging.

There is much more to IUID than compliance. Keep looking for the value added in areas such as serialized tracking, maintenance and logistics

Pointing to a large rack in the ASFT warehouse Rick points out that now, with IUID, his customer has total asset visibility of every item, including those that are embedded. That is a powerful tool that was never available before. And because it was never available, some prodding is necessary to think outside the box.

At A2B Tracking Solutions we focus entirely on helping companies such as ASFT to become knowledgeable about and to implement IUID and RFID. Along with Rick Gartmayer we have an important question you should answer: What will you be able to accomplish, that was not possible before, with the total asset visibility you gain through IUID?

VENDOR'S CORNER

Planning a DoD UID Bar Code Marking System



There is a misperception that direct part marking (DPM) is a DoD UID requirement. DPM may be the only way to apply a Ull to some items, but it is a niche method and not a DoD requirement. With the exception of heavy duty equipment or machinery that may require other permanent marking techniques because of their physical properties, adhesive labels produced with thermal-transfer printers are more than sufficient to mark a significant percentage of all items that require a Ull. In fact, thermal label printers are suitable for

marking about 80 percent of items provided to the DoD and are the lowest-cost and easiest-to-use option available.

Label Printing

On-demand thermal transfer bar code label printers are all that most DoD suppliers and agencies need to satisfy their marking requirements for items where a permanent adhesive label can be affixed to the item. Direct-thermal and thermal-transfer on-demand printers are the technology of choice for mission-critical bar code labeling applications in manufacturing, logistics, aerospace, and most other industries. Direct-thermal printers use no ribbon and apply heat directly to chemically treated media. Thermal-transfer printers work by using a printhead to apply heat to a ribbon, which melts the image onto the label material. They create

a longer-lasting image than direct-thermal models. Thermal-transfer printers are ideally suited to meet IUID requirements because they work with a wide range of durable media and provide outstanding print quality for Data Matrix symbols, especially for small items.

Advantages:

There are many styles of thermal-transfer printers, ranging from compact desktop units to high-speed industrial models that can apply labels in high-volume environments. Thermal-transfer printers are compatible with a wide range of synthetic media suitable for lifetime identification, including Kapton® labels that can withstand temperatures up to 600° F. Thermal-transfer printers are highly valued for IUID marking because they create quality Data Matrix symbols on very cost-effective media. Estimating total cost of ownership and the value the print system provides, however, depends on selecting the correct printer and the right media.

Media Compatibility

Label material and ribbons should be matched to the specific printer make and model for optimal bar code quality and printer performance because thermal-transfer printers and supplies are not fully interchangeable. When evaluating printers, it is important to determine if they can accommodate the media sizes required for labels. It is also imperative to make sure the printer vendor can supply label stock with the required heat, chemical, and abrasion resistance in the correct sizes. The greatest danger is that the Data Matrix symbol will fade over time and become unreadable. Label adhesives and protective coatings may also fail. Incompatible media can also cause the thermal printhead to work harder and lead to premature failure. These problems more than offset any money that might be saved by trying to use incompatible or bargain media for IUID printing.

Performance

Because many printers can't produce variable-data Data Matrix symbols at the top-end print speeds listed on their spec sheets, it is important to test printers to ensure they can meet your label throughput requirements, especially for high-volume printing and when automatic label applicators are used. The standard resolution for most thermal-transfer printers is 203 dots per inch (dpi), which is sufficient for most IUID labeling needs. Some printers offer resolution of 300 dpi or higher, and there is a misperception that 300-dpi is the minimum resolution required to produce Data Matrix

bar codes at small sizes. Higher-resolution printheads are available as options, but this adds to the printer cost. The potential added cost should be factored when comparing printers. Testing will determine which printers and printhead resolutions can satisfy an organization's specific UID marking needs. As a rule of thumb, 300-dpi resolution for thermal printers is not necessary unless the Data Matrix symbol is smaller than a quarter inch square. For generating an A-rated 2-D bar code in a small size, Zebra Technologies offers thermal-transfer printers with options for 300-dpi and 600-dpi printing. Laser printers should have higher than 300 dpi resolution even for larger Data Matrix symbols because of how they produce individual elements.



Ease of Use

Printer design and management capabilities determine the amount of time and labor required for operation, and therefore are important components of total cost of ownership as IUID labeling will be a mission-critical operation for many DoD contractors. Printer downtime is an unwelcomed operational disruption so printers that enable operators to easily load labels, change ribbons and clear simple errors can deliver productivity and reliability that will minimize downtime. Thermal-transfer printers may also have features that simplify management and maintenance tasks for system administrators. Advanced models can issue proactive notices when media is running low and send instant alerts for error messages or if printing is stopped for any reason. Administrators can take advantage of networkable printers that support remote configuration to perform troubleshooting and upgrades from a central location. These features save considerable labor time, minimize downtime and help organizations get the most from their printer assets.

Conclusion

Thermal bar code label printers and RFID smart label printer/encoders provide an opportunity to improve business-process efficiencies as well as meet the UID mandate. DoD contractors with ongoing labeling needs can take control over their IUID marking operations by implementing an in-house thermal printing system to best support their organization's operational needs and IT infrastructure and provide the most value and superior total cost of ownership.

UID EDUCATIONAL WEB SEMINARS

In our quest to provide ongoing education to those who are implementing UID and RFID we offer the following seminar series:

UID 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 Sylvania in the early 1960s and later, in 1968, founding Computer Identics Corp, the first company to design and manufacture 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)

Tuesday, September 15

Tuesday, September 29

Thursday, October 15

Tuesday, October 27

To register for any of these dates, email pchasse@a2btracking.com or click on this link:

http://www.uidsolutions.com/webinar_signup.aspx



Additional Education

Zebra Technologies recently sponsored a one-hour IUID webinar featuring A2B Tracking Solutions customers Rick Gartmayer of ASFT and Cinda Brockman of SAIC. Each described their successful IUID implementations stressing important decisions they made along the way and sharing lessons they have learned. There is a great deal of compelling information available. For those of you who want to experience it again, or if you missed it the first time, we provide the link below. You may also want to pass it along to others in your organization.

<http://gcn.com/Webcasts/2009/06/Real-Life-Best-Practices-for-IUID-Implementation.aspx>

NEWS FROM A2B TRACKING:

Latest Press Releases

Latest Press Release

8/4/2009 - A2B Tracking Solutions Inc. Sub-Contractor in Army AIT-IV Award PORTSMOUTH, RI – A2B Tracking Solutions Inc has been named as a sub-contractor to CDO Technologies in the U.S. Army's AIT-IV contract award. Announcement of the indefinite delivery/indifferent quantity (ID/IQ) contract, which is worth more than \$400 million, and given to multiple companies over three years

7/24/2009 – A2B Tracking Solutions Inc. Receives Blanket Purchase Agreement in Support of USAF Contract PORTSMOUTH, RI - The U.S. General Services Administration (GSA) has granted A2B Tracking Solutions Inc. a blanket purchase agreement (BPA) for up to \$4 million in support of a GSA contract announced late last year on behalf of the US Air Force.

7/9/2009 - ID World Congress Taps A2B President for Technical Committee PORTSMOUTH, RI - Peter M. Collins, President of A2B Tracking Solutions, Inc., has been named to the Technical Committee of the ID World International Congress. (more)

A2B Travels

NPMA – August 18-19 - San Antonio

2B Tracking Solutions President Peter Collins will be speaking at the National Property Managers Association (NPMA) National Education Seminar in San Antonio, TX – August 17-20. Peter will speak on Streamlining Solutions for UID Compliance at a 1:45 session on Monday, the 17th. (Note: Joan Hacker is wrongly listed as the speaker in the NES catalogue.)



UID Forum Implementation Strategies for Programs & Suppliers

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A2B will be exhibiting at Booth #920 during the 2009 DoD Maintenance Symposium & Exhibition in Phoenix.

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