



UID QUARTERLY: FALL 2009

INTRODUCTION

Welcome to the UID Quarterly Fall 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 - Technology Solutions President Jon Andresen makes a compelling case for the benefits of IUID and why those benefits far outweigh the 'pain' of compliance.

UID Solution - Enterprise-wide IUID deployment is easier with a Web-based system that spans scattered locations while ensuring data management excellence.



UID Success - Proper management of IUID data is crucial to compliance success as well as reaping long term benefits downstream. We present a light tutorial on what happens when the wrong data gets into the supply chain – something your IUID team must understand and plan for.

UID Education - Check out the upcoming UID web seminar dates presented by David Collins of Data Capture Institute. Learn about Zebra's December 9th Technology Day.

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

OPINION

UID is Only a Cost Right Now!

Downstream Benefits of UID

By Jon Andresen



You're not stupid. You can clearly see that following the UID mandate is going to be very expensive in engineering changes, new data plates or direct part marking and in equipment. And there are also process and IT changes across every product line. You are feeling like this is being forced on you.

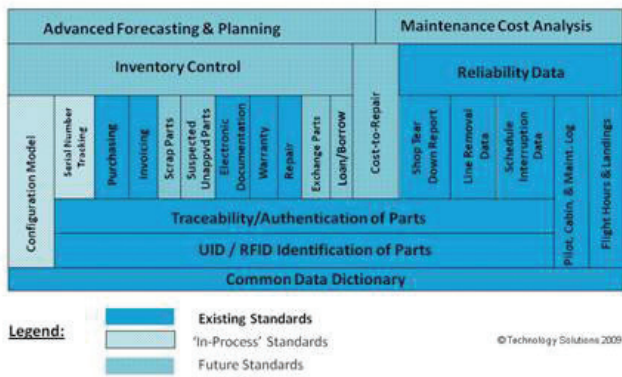
But let's be honest – why else would you change to get better if it wasn't forced on you? You've had many opportunities before to improve the way you do business and you've 'passed' on most all those – good idea but don't have the time, don't have the money, don't have the manpower, yada, yada, yada...Well, this opportunity you won't be 'passing' on, at least not if you intend to still be in business 5 years from now! Luckily the DoD mandated that all parts over \$5000 will be marked according to the UID Policy. I say "luckily" because your company will need what UID has to offer, even if you or your management do not see that yet.

Marking parts with UID data is simply a cost – there are no benefits to marking the parts. But there are benefits to using the data found in the mark throughout your

manufacturing operation, and throughout the lifecycle of the item you are marking. Fast, accurate data collection is the new paradigm for this century, and if we can make the data collection automatic and transparent as with RFID technology, even better (but that is a different story to tell later). Like every other significant activity in life the benefits come after some effort, whether it is an exercise program, a marriage relationship, or changing your operations to use this new UID data on the parts you make. And the benefits will come quicker to those who have the boldness to re-think how they can do business better, faster, and cheaper in the long run if they use the UID data available to them.

What are those downstream benefits of UID data? The commercial aviation industry in 1990 invented what the DoD now calls UID Construct 1 – essentially giving an item a 'social security number' that lasts for a lifetime, regardless of where it 'lives', where it 'works', or even if it gets married and changes its very important 'last name' (i.e., its Part Number). And now, with this unique ID for the item, everybody who touches the item will ID it by that unique name, and now we can begin to have **visibility** for that item wherever it is. Just having visibility will bring huge benefits in that now we can begin to see where the problems are occurring – whether in the manufacturing process, the logistics process, the operations process, or the repair process - and smart people (and later, smart systems) can focus their efforts in the right areas. After simple **visibility** is achieved, we have the foundation laid for many more benefits that can be built on that UID data – **Traceability**,

Functional and Data Architecture



Reliability, Serial Number Tracking, Warranty, Repair, PLCS and many other derivative benefits from those top ones.

A functional and data architecture I have used for 15 years (updated for the UID Policy) is shown below. This both shows a picture of what we have, but also where we need to go in the future. This is modified chart of what commercial aviation currently has, but the same basic architecture can be found in several CONOPS reports published by the

DoD. The primary point to be made is that UID data lays the foundation for all future benefits to be achieved, and your systems need to be built on that same foundation.

With UID data that you are marking on your items, you have the foundation for simple **Visibility**, and with some simple data exchange standards in place you also get **Traceability** and **Warranty**. Adding some log-on/log-off data you gain **Serial Number Tracking**, and adding break/fix data you get **Reliability**, and all are benefits that start with marking your parts with UID data today! I am involved in weekly meetings to define the standards necessary for federated databases to 'play well together' (think Google...) so when you are ready for all those benefits, the systems will be ready to deliver those benefits to your organization. I can already see you getting better, faster, and cheaper in how you conduct business in the future!

About the author: Jon Andresen is the President and Principal Consultant of Technology Solutions, an international consultancy focusing on business and technology integration including Spec 2000 eBusiness, UID, RFID, bar coded part marking, part traceability, reliability, and data lifecycle. Clients include the US Dept. of Defense, Boeing, Boeing Helicopter, Bombardier, Honeywell, Fujitsu, Northrop Grumman and other major corporations. He spent 17 years at United Airlines as the IT Technical Architect, and he served as the Chair of the ATA Spec 2000 Bar Code Taskforce for 16 years and was one of the UID architects in 2002-3. Currently he is involved in defining the data specification for high capacity RFID chips. He holds a Masters Degree in Mechanical Engineering from MIT and has worked extensively in the airline, railroad and defense industries implementing new systems and technologies to improve their business processes.

IUID SOLUTION

The Case for Web-based IUID Solutions



Enterprise-wide deployment is made easier with the trend to Web-based system deployment. In reviewing the requirements of IUID compliance and good data management, we have seen the need for an application that reaches scattered locations, in order to maximize IUID across the enterprise.

Data Management across the Enterprise

We've said it before, and we'll keep saying it - proper data management is absolutely critical for IUID compliance. That said, there are some points to ponder in planning implementation. First, the key to IUID is the globally unique identifier assigned to each item. This number must last the life of the item and will eventually be the key field in all DoD asset management databases. If you represent a corporation looking into deploying an IUID compliance system, there are some strategies that need to be thought through to decide what deployment model you should employ.

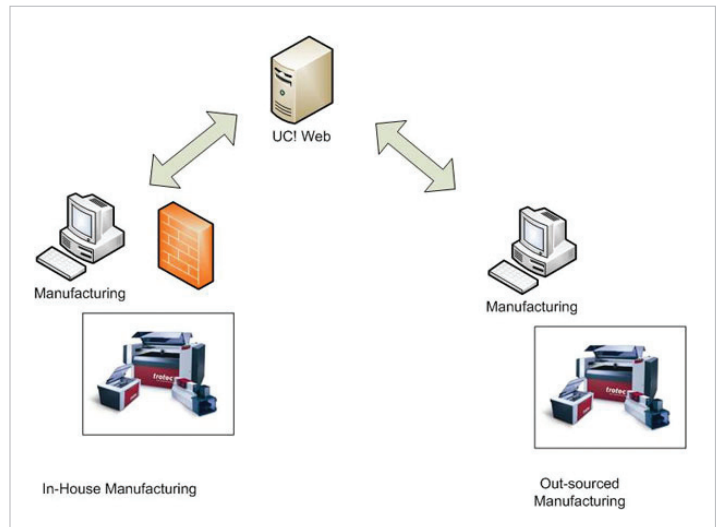


Figure 1: Different locations for manufacturing, administration, and maintenance all connecting to the same Web application.

Scenario #1: If you are a company with multiple locations, a typical client/server application would be difficult to push throughout your environment. Each location may have a different responsibility for various parts or items. One location may be building the end item while the other locations may be manufacturing parts and sending them over for final assembly. All the data should reside in the same database to be used by each unit, thereby guaranteeing item uniqueness and compliance through final assembly.

Scenario #2: Consider also the follow-up work that may be needed after initial application of the IUID. This may include recording the attachment of the IUID to the item, changes in the embedded hierarchy and various life cycle events. Contractors who manufacture new items may also have the requirement to handle field maintenance. In that case, they will need to utilize the IUID compliance system in remote locations to record part rollovers, life cycle events, and changes to embedded relationships. Proper handling of these transactions is essential to remaining in compliance, but these actions may take place at locations far from the original marking.

Scenario #3: What happens when a corporate print shop handles the creation of IUIDs as well as printing of the IUIDs for other business units? Each business unit “orders” a set of appropriate labels with the appropriate pedigree data. The shop creates the IUIDs and re-distributes them appropriately. In that instance follow-on activities must include the recording of the attachment of the IUID as it is applied to an individual item, and that information should reside in a common database with access throughout the company. Maintaining data integrity in this scenario is extremely difficult when the marking and reporting activity crosses geographic areas or different business units on separate networks.

Use the Web

This is where a Web-based application leads to success. The same database storage for IUID compliance is accessible from each location via the Internet. Each location can record and manage the actions they need to perform. All locations and entities are able to see the current status and track the progress of IUIDs. If the location has access to the Internet, the application is available and useable anywhere in the world. And driving IUID compliance through the Internet allows you to utilize the same application and business rules across the enterprise and throughout the world, in order to remain in compliance. Users at remote locations have access to the information without the need to install software on each PC. Reporting modules can be accessed by upper management to monitor the IUID program, again without fully installed software.

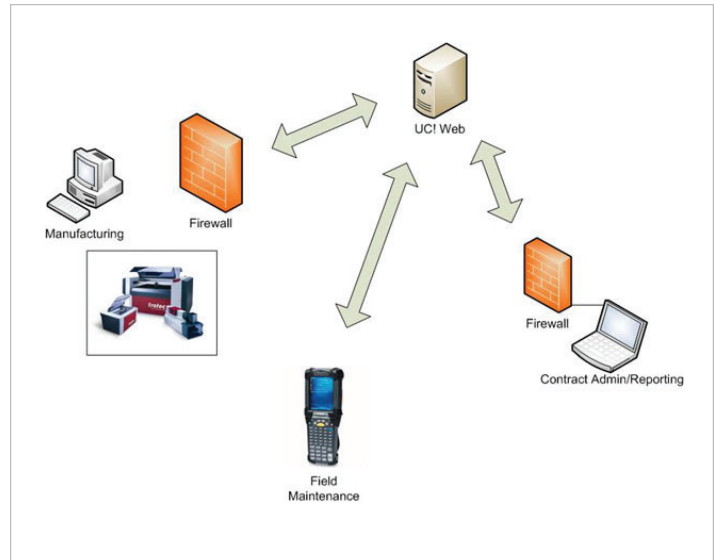


Figure 2: In-house printing along with ordering through an out-sourced manufacturer for specific items all controlled through UC! Web.

Enable all systems

A Web-based IUID system should allow integration of legacy systems, and all DoD systems will need to be IUID enabled as the program continues. From a contractor’s perspective, IUID system enablement allows for proper IUID creation and compliance as well as integration to allow for printing and maintenance of IUID data. The time has come for a Web-based system that utilizes Web services and APIs to IUID enable all systems. Manufacturing systems that contain part and serial number information should be enabled to use the IUID as a data field and then integrated to pull that data. The IUID system should automatically assign IUIDs, check for proper syntax, check for duplication in the local IUID system as well as the IUID Registry and then pass the IUID back to the original system.

The fact is that current systems used by contractors and DoD are unable to handle full IUID compliance, nor should they need to. Rather those systems must be tasked with using the IUID as a key field, with the rules around creation and printing of IUIDs left to specialized applications and the Web services that will help to enable them.

Online ordering

Another scenario that may play out for a contractor or government agency is the need for both local printing/ marking as well as ordering of labels from an outsourced provider. The IUID compliance application should be required and used for data management of the items that are being printed both in house and ordered online. The key is to link the system with the order management system of your preferred vendor. This allows for easy transmission of the data to the provider, thus eliminating data issues with

orders while maintaining control of that data. It also allows you to know exactly where the printing is taking place.

Help your IT department

In a time when fewer employees are burdened with greater tasks, IUID Web-based applications allow the IT department to focus on their core requirements without the need to maintain additional servers and installed software. The result is lower overhead for the local IT department that is already maintaining the network as well as the connection to the outside Internet.

This discussion of Web-based applications doesn't eliminate the need for a client server application. There are still many environments and applications for an IUID compliance system that is installed and utilized in remote applications. A "stand-alone" cart, for example, may have no connection to the network or Internet to utilize a Web

system. In this case, the IUID system must be installed on the laptop controller for the marking cart and used locally. These systems may be deployed in more remote manufacturing locations or maintenance areas.

In certain use cases, a hybrid approach can be utilized to handle offline transactions. This would enable certain transactions to be performed and stored on the device (either laptop or mobile computer) and uploaded to the Web once connection is re-established. This will allow for even greater ability to manage IUID data anywhere, anytime.

Contact A2B for UC! Web™ information

With the introduction of UC! Web the full IUID compliance features of UID Comply! are available without the need for installation. This allows for ease of integration at IUID operations across the enterprise and around the world.

IUID SUCCESS

Ignore IUID Data at Your Peril

When the dust settled from the UID Forum in Orlando it was apparent that the conference produced the largest turn out of IUID professionals of any UID Forum to date – by a long shot. This reinforces that momentum continues to build at a faster rate than ever before.

With many new faces from the conference, we want to surface a topic that we here at A2B have been stressing for years – data management.

Data is often the last issue to be considered when people deal with unique asset identification for IUID. Ignore data at your peril, however, because data offers the greatest potential for "land mines" in the entire compliance process.

Here's a puzzle for you to solve: What would happen should the wrong pedigree (incorrect syntax) be encoded into a MIL STD 130 plate that is then riveted or somehow permanently affixed to an item and that incorrect data is also sent to the IUID Registry? What would be required to unravel that incorrect IUID?

Although the answers are not printed upside down, here are the steps that would be required:

1. Remove the item from the IUID Registry.
2. Remove the MIL STD 130 barcode from the item itself. This can be a challenge for deployed items.
3. Recreate the correct MIL STD 130 barcode.

4. Affix the new barcode and send the correct data to the IUID Registry.

Now multiply that by hundreds or thousands of items and you have a nightmare on your hands.

There is one more wrinkle in this puzzle. What if the incorrectly marked IUIDs get into the supply chain? That would mean the bad barcodes are being scanned and bad data is populating systems for procurement, engineering, maintenance, property management and logistics.

UID Requires a Team Approach

We had some feedback, following our most recent UID Web Seminar that clearly illustrates the importance of tackling IUID with a team approach. One attendee wrote, "Please accept our thanks and appreciation to both A2B and David (Collins of Data Capture Institute) for bringing us an informative hour that was well spent. Everyone on our team sat together, property management, purchasing, operations and executive departments, up to and including our president. We heard as one the inevitability of moving ahead with IUID."

Time and again we hear from individuals who have been tasked with implementing IUID, and inevitably those individuals become frustrated with the internal struggle to involve all business functions that are impacted. Group education is a very effective way to keep everyone aligned with the impact of IUID.

To IUID champions everywhere we offer this advice: Take a team approach to lighten your burden. Start involving all stakeholders early in the process. Be sure everyone is educated about IUID requirements and impact.

UID AND RFID EDUCATIONAL WEB SEMINARS:

UID Educational Web Seminars from Data Capture Institute

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

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 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, November 12
Monday, November 23
Tuesday, December 8
Tuesday, January 12
Tuesday January 26
Monday, February 8
Thursday, February 25



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

Zebra Technology Day

Learn the Latest at Zebra's Government Technology Day



A2B Tracking Solutions and Zebra Technologies are hosting a Government Technology Day and you're all invited! Come learn about the latest technologies for UID compliance and asset

tracking. Join us for lunch and an informational session to learn how companies are using A2B and Zebra products to streamline their UID practice. Then stay for our open house where you can see our solutions in action, as well as speak one-to-one with solution experts from A2B and Zebra Technologies. Can't make lunch? Then be sure to stop by for the open house.

Where:

Doubletree Hotel Crystal City
300 Army Navy Drive
Arlington, VA 22202-2891

When:

Wednesday, December 9, 2009
Noon to 6 p.m.

What You'll See: A2B's UID Comply!® data management software working in conjunction with Zebra's new Xi4™ Series printers and P4T™/RP4T™ mobile thermal transfer printers.

Be sure to RSVP today by contacting Juliet McDaniel at Zebra Technologies with your name, company name, and phone number at jmcdaniel@zebra.com.

We look forward to seeing you all at Government Technology Day.

NEWS FROM A2B TRACKING:

Latest Press Release

10/1/2009 - A2B Tracking Solutions Inc Marks 15 Year Anniversary

PORTSMOUTH, RI - A2B Tracking Solutions Inc, a leader in bar code-based, turn-key tracking solutions and the leading software provider for Department of Defense serialized item tracking and Item Unique Identification (IUID) is celebrating its 15th anniversary.

9/23/2009 - UID Comply! Web™ Introduced by A2B Tracking Solutions Inc.

PORTSMOUTH, RI - A2B Tracking Solutions Inc, the leading IUID and RFID total solutions provider for MIL STD 130 and MIL STD 129 requirements, showcased UID Comply!® Web (UC! Web™) during the recent UID Forum in Orlando.

NEWS FROM A2B TRACKING:

9/9/2009 - **A2B Tracking Solutions Inc. Receives Rhode Island Innovator Award**

PORTSMOUTH, RI - A2B Tracking Solutions Inc was named Finalist in Information Technology, in the Providence Business Journal's fourth annual Innovation Awards. In partnership with the Rhode Island Economic Development Corporation, the awards are made to Rhode Island companies whose products or services are judged to represent game-changing innovation for either the company or the market in which it operates... (more)

A2B Grows and Grows

During the past year A2B has doubled the size of its Rhode Island headquarters, added a Florida office and more than doubled its workforce. Below are four new team members that you may meet along the way.

Program Manager: Mark Freydl

With over a decade of experience orchestrating software solutions for small and large companies, Mark Freydl has several years of corporate leadership as well as project management experience, including both internal and billable projects. Mr. Freydl was also the Founder and Chief Executive Officer of a software company founded in 2000 targeting the web services industry. Leveraging his experience as a US Marine, his company also provided specialized software consulting services to the defense industry. The product was adopted by such organizations as L-3 Communications, People's Bank and several branches of the US military.

A2B Travels



A2B President Peter Collins will be a featured speaker in the Future of ID segment at the ID WORLD International Congress in Milan, Italy, November 3-5, 2009.

Site Manger: Ray Gagne

With an extensive and successful track record working with the FAA, TSA, and the Department of Homeland Security, Ray Gagne is a veteran of the A2B team with industry expert knowledge and experience in the business of asset management within large organizations. He has played roles involving a wide array of tasks, including requirements gathering, property accountability (cradle to grave), RFID/UID implementation. He is a former lead for TSA and consultant to DHS. Working with TSA, he was responsible to the field for maintaining inventories for 429 airports and coordinated all facets of property management work between other TSA organizations.

Marking Team Leader: John Jay Mouligne

John Jay is involved with developing A2B's UID On-Demand™ onsite label production capability. Bringing a technical background, mostly derived from work in the marine field, he manages label production and training of label production technicians. Also currently a candidate for a Masters Degree in Diplomacy and Terrorism, Mouligne is a motivated intellect with a great deal of hands-on leadership experience in government-related pursuits.

Technical Support Specialist: Dan DaSilva

The A2B technical support team is growing along with additional hours of technical support staffing. The latest member of that team is Dan DaSilva who comes to us from Self Service Networks, where he handled both software and hardware support for two years. A graduate of Johnson & Wales University, Dan majored in technology management.



Plan to visit the A2B exhibit during the San Antonio UID Forum – February 22-24 in San Antonio.