

OPINION

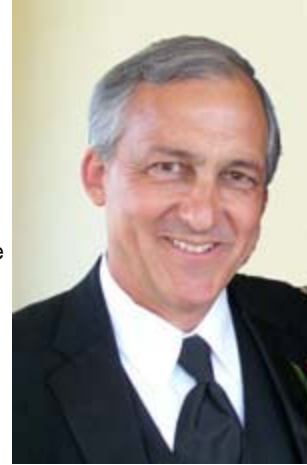
UID is Only a Cost Right Now!

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 processes 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.



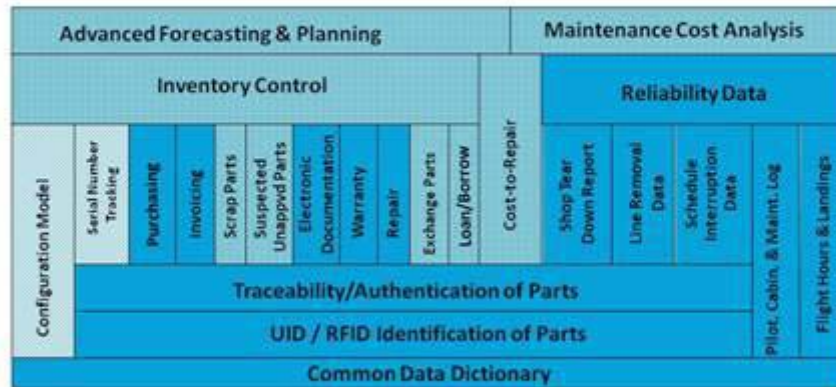
Marking parts with UID data is simply a cost – there are no benefits to marking the parts. But there are benefits to using the data found in the mark throughout your manufacturing operation, and throughout the lifecycle of the item you are marking. Fast, accurate data collection is the new paradigm for 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, 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!

Functional and Data Architecture



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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.