UID Compliance: The Ultimate In Asset Tracking

The U.S. DoD's RFID (radio frequency identification) initiative may seem extensive, but its item serialization project — UID (unique identification) — may have a bigger impact.

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The U.S. DoD has more than 1.5 million active-duty personnel deployed around the globe. Efficiently managing the assets that support these personnel can be complicated, to say the least. And, the system doesn't always produce the best results. A 1998 report, for example, found that the DoD had inventory imbalances that were costly and ineffective. When it came to supporting current operations and a war reserve, the DoD's inventory was excessive. However, the report found that key spare and replacement parts inventories were inadequate.

The report from the GAO (Government Accounting Office) validated what was anecdotally assumed: The DoD needed to better manage its assets. Specifically, this would require the DoD to have its assets identified in a serialized manner, and that each serial number would have to last for the duration of the asset's life span. This serialized approach to asset identification and management within the DoD is called UID. UID became mandatory in 2004, but the policy is only today starting to affect many DoD suppliers.

The DoD's UID initiative is interesting for many reasons, not the least of which is that it potentially affects tens of thousands of suppliers. The serialized marking of assets, however, is not just beneficial to the DoD for tracking and management. Unlike some RFID mandates where business cases are scarce, there is little doubt that suppliers, too, can benefit from serialized identification of the assets they produce. "Suppliers should not look at the UID initiative as a compliance mandate," says John Piatek, vice president of technologies at Freedom Technologies, a data collection solutions provider. "It's a way for suppliers to save money and improve processes."

In general, the UID initiative requires that all items procured by the DoD need to be identified by a unique serial number if they cost more than $5,000 or are mission-critical or spare/repair parts. This not only includes new assets that arrive within the DoD that meet the criteria, it also includes so-called legacy assets. These are current DoD assets that meet the UID criteria and now need to be uniquely marked. In the end, these assets' unique identifiers will be stored in an enormous database called the UID Registry. It's from this database that the DoD can individually track and manage its assets.

SERIAL NUMBERS FOR EVERY ASSET

The UID initiative prompts a lot of questions from both suppliers and industry observers. Obviously, the size and scope of the project is ambitious. Also, questions abound regarding the actual marking of the assets and the recording of these assets in the UID Registry.

At a UID Forum event in San Diego in February 2007, the current scope of the initiative was outlined. At that time, the DoD announced that more than one million assets had been assigned a UII (unique item identifier) and stored in the UID Registry. That's a significant number, but only a fraction of the expected total assets that will eventually be identified and recorded. "Including the legacy assets, it's expected that the UID Registry will eventually contain more than 100 million entries," states Piatek. "A large bulk of those total entries – tens of millions – will be legacy assets. Each branch of the military is setting about marking those legacy assets. Each has its own goals and timetables." A representative from another UID solution provider adds, "The rate of registration will be straight up. It's going to be a steep incline."

Before the assets can be logged into the UID Registry, of course, they need to be marked appropriately. According to the UID initiative, assets that meet the outlined criteria must be identified using the 2-D data matrix bar codes. Unlike the familiar 1-D bar codes found on consumer goods and shipping labels, 2-D bar codes resemble a small checkerboard and store exponentially more data than the 1-D counterparts. The asset and application really determine the marking process. For instance, some assets can be tagged by affixing properly marked labels. Other assets, however, may need to be

identified using a DPM (direct part marking) process where bar codes are etched into an asset. Still other assets can be handled with metal tags that have bar codes and are affixed to the items.

Once the assets are uniquely identified, the UID can be registered in the UID Registry using a process known as WAWF (Wide Area Workflow). It's an automated process that not only validates the registering process, but also triggers payment to a supplier. For legacy assets (or other assets that are registered but no payment is required), the UID can be manually uploaded to the UID Registry. According to the UID initiative, all existing serialized assets will be entered into the UID Registry by September 2007. And by 2010, complete UID marking of all legacy assets will be complete. It's generally agreed that these specific milestones are aggressive and will be difficult to hit. "The DoD is moving forward with this initiative. It's inevitable," states Piatek. "There may be some snags along the way, but the objective remains the same."

RFID AND UID JOIN FORCES

For some DoD suppliers, the UID initiative may not be the only marking mandate they are currently facing. In addition to UID, the DoD is currently in the process of rolling out an RFID initiative for some suppliers regarding case- and pallet-level shipments. In both cases, the requirements for UID and RFID marking are built into the contracts that suppliers have with the DoD. In some cases, the contracts contain language for both initiatives. While some suppliers may have difficulty sorting out the individual requirements, it's important to keep in mind that RFID and UID accomplish two separate objectives. UID might be thought of as a Social Security number and RFID as an EZ Pass. A Social Security number is unique to a person, and it is something that identifies a person throughout their life in all kinds of situations. The EZ Pass is best at keeping track of where a vehicle is and where it has been. It's two different technologies used for two different purposes.

While RFID and UID tagging have two distinct goals, that's not to say the two technologies don't work in conjunction. In fact, the two technologies and initiatives are complementary. Generally, the DoD is deploying RFID technology to identify and track supply chain shipments at the case and pallet levels. UID is being deployed to track individual assets at the item level. "RFID and UID marking allow the DoD to create a parent-child relationship between the item [UID], package [UID], case [RFID], and pallet [RFID]," explains Piatek. "It's a process that allows you to marry individual items with packages and those packages with cases and pallets."

The size and scope of the two DoD initiatives are both similar and different. The pace at which both initiatives are being rolled out is not as quick as originally anticipated. However, there is now a sense of inevitability with both UID and RFID, as the requirements are starting to appear in supplier contracts with the DoD. The scope of each initiative can be debated. Both will have dramatic effects on the DoD's efficiency and accuracy. However, UID should have more of an impact. Again, it's the serialized nature of the initiative that gives it an advantage over RFID. Serialization has a lot of inherent benefits that can be extended to many processes. It allows inventory counting to be more accurate. It facilitates maintenance and repair processes. It improves quality assurance and security. It increases accountability. The list of benefits is extensive for the DoD and, if deployed correctly, for its suppliers as well.