

DOD Releases Final RFID Policy

The U.S. Department of Defense has issued its final policy guidelines regarding requirements for suppliers to put RFID tags on shipments of pallets, cases and high-value individual items.

By Mark Roberti

Aug. 9, 2004—The U.S. Department of Defense has published its final policy guidelines for the use of both passive and active RFID tags within its supply chain. The requirements for suppliers expand upon a draft policy released in February.

"We did a lot of due diligence and had a clear idea of what we wanted to do, so the final proposals are pretty close to the draft put out earlier in the year," says Alan Estevez, assistant deputy undersecretary of defense for supply chain integration. "We've added a lot more detail around tag data standards and business rules."

RFID tags will be mandatory in DOD contracts issued as of Oct. 1, 2004, for delivery of materiel on or after Jan. 1, 2005. The department published its policy guidelines in three appendixes to a memo from Acting Undersecretary of Defense Michael Wynne, dated July 30. The memo states that all contracts with the DOD shall require that passive tags be applied to cases and pallets and to individual high-value items (those currently requiring the military's Unique Identification code, or UID).

The DOD will incorporate the policy into the next update of the Defense Federal Acquisition Regulation, the Defense Transportation Regulation, and the Military Standard 129, which outlines the standard military practices for labeling goods in the supply chain.

The first appendix to Wynne's memo spells out the policy for tagging freight containers, including 20- and 40-foot seagoing cargo containers and large airborne pallets. All containers being shipped outside of the continental United States must have active (battery-powered) tags with the contents of the container written into them at the point of origin.

A second appendix spells out the requirements for passive RFID tags. It says: "To facilitate the use of RFID events as transactions of record, the DOD has embraced the use of Electronic Product Code tag data constructs, as well as DOD tag data constructs, in supporting the DOD data environment. As the available EPC technology matures, the intent is to expand the use of passive RFID applications.

The DOD plans to use passive UHF tags operating between 860 MHz and 960 MHz with a minimum read range of three meters (about 9 feet). Until EPC UHF Gen 2 tags and readers are available, the DOD will accept Class 0 64-bit read-only tags, Class 1 64-bit read-write tags, Class 0 96-bit read-only tags and Class 1 96-bit read-write tags. Once Gen 2 tags and readers are available, the DOD will phase out Class 1 and Class 0 tags.

Suppliers to the DOD must encode an approved tag using either an EPC tag data construct or a DOD tag data construct. Suppliers that choose to use the DOD construct will essentially replace the manufacturer ID in the EPC number with a Commercial and Government Entity code. EPCglobal subscribers can use a standard EPC, so consumer packaged goods manufacturers can use the same tags they use for Wal-Mart for the DOD.

The passive tag appendix provides details on when specific EPC data constructs—including Serialized Global Trade Item Number and Serial Shipment Container Code—should be used (the entire memo, including all three appendixes, can be downloaded from the www.dodrfid.org Web site). It also spells out in detail how many bits of data on the tag should be used for the elements of the data construct, including the company prefix, item reference and serial numbers.

Later this year the Defense Logistics Agency (DLA) will install RFID readers and supporting infrastructure at strategic distribution centers in San Joaquin, Calif., and Susquehanna, Penn. The tagging of deliveries to the DOD will be phased in by procurement method, type of goods, location and layer of packaging.

Beginning Jan. 1, 2005, suppliers have to attach passive EPC tags to all individual cases, all cases packaged within a pallet and all pallets of packaged troop rations, clothing, individual equipment and tools, personal items and weapons systems repair parts and components shipped to the two DLA distribution centers.

Beginning Jan. 1, 2006, suppliers will be required to tag cases and pallets of subsistence and comfort items, packaged petroleum, lubricants, oils, preservatives and chemicals, construction and barrier material, ammunition of all types, pharmaceutical and medical material shipped to 32 depots throughout the United States and the two DLA distribution centers.

Beginning Jan. 1, 2007, all cases and pallets of all commodities shipped to all DOD locations should be tagged.

"We are working to create a contractual clause so that will become a contractual requirement," says Estevez. "We are also updating our labeling standard that is already a contractual requirement to require the application of an RFID tag with these data constructs."

The policy will require suppliers to send advance shipping notices via existing Electronic Data Interchange (EDI) networks, rather than the EPC network, to get transactional data into the DOD's back-end software systems. "We have no immediate plans to use the EPC Network," says Estevez. "We're certainly talking to EPCglobal and looking at how the network will evolve and assessing the value it can provide to us."

The policy also doesn't require data on the tag to be encrypted. Estevez says one reason is that the information on a passive tag is simply a serial number that means nothing until it's associated with information in a database, and the second reason is potential enemies should not be able to get close enough to read the tags. "If we have people within 10 feet who are able to read a passive tag—or even 300 feet for an active tag—then we have bigger problems than them knowing what items are in our supply chain," he says.

The RFID policy memo doesn't spell out how the DOD branches should pay for the RFID equipment—another memo will be issued to deal with that issue—but it does say that in 2007 and beyond, all data collection devices purchased should be RFID enabled, so all bar code scanners should also have RFID capabilities.

"You are going to make a purchase anyway, so the cost [of the RFID reader] is now just the marginal cost between a standard bar code reader and an RFID reader," says Estevez. "In 2007, I'm not sure that difference in cost is going to mean anything, but if it does, we have plenty of time to make adjustments."

The DOD has run a number of pilots over the past few months, and Estevez says that these produced no surprises and justified the military's view that RFID was worth the investment. It's not just that the DOD can reduce inventory. RFID could help the DOD better support soldiers in the field.

"Better management of inventory means weapons systems are up and operating more of the time," he says. "That's where the big savings are, because if we can keep our weapons systems up and running through better inventory management, then theoretically we need fewer weapons systems to have the same war fighting capability."

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