

# WARFIGHTERS & RFID

By *Harold Clampitt*



**M**ilitary logistics are the art of placing the right material at the right time in the right condition for the right warfighter. Obviously, the performance of this task affects the preservation or destruction of life. History provides many examples where logistics acted as the Achilles heel. Perhaps we may be so bold as to claim logistics as the only common factor across all theaters of operations for the execution of any and all military goals. If we accept that truth, or even some watered down version, it quickly becomes clear that improving logistics amplifies military success and saves warfighter lives.

With so much to gain, our search for improvement turns to technology for leverage in speed, handling, storage, shrinkage and asset tracking, etc. If we are to be a leader in warfighter logistics then we must manage our resources and our time so as to ensure performance in these areas plus real time visibility. In that regard, radio frequency identification has been chosen by the Department of Defense as the technology of choice to enhance logistics.

## Warfighter Policy on RFID

Mr. Michael Wynne, Acting Under Secretary of Defense (Acquisition, Technology and Logistics), announced a new policy on July 30, 2004 for the use

of radio frequency identification within the Department of Defense (DoD). It is the stated goal of the DoD to use “RFID to enable hands-off processing of materiel transactions, allowing the DoD to re-apportion critical manpower resources to warfighting functions and to streamline business process.”



To signal the priority of this effort the DoD has stated that they will be an early adopter of passive RFID tags.

DoD is executing a systematic campaign to facilitate the adoption of RFID by offering the following resources to its supplier community:

- Hosting industry meetings to discuss RFID issues. The Assistant Deputy Under Secretary of Defense (Supply Chain Integration) regularly schedules public meetings to clarify and answer questions on DoD RFID Policy.
- Publish military specifications. MIL-STD-129P with change 3 provides the minimum requirements for uniform military marking for shipment and storage. RFID tags are

covered by this specification since “marking” is defined as *“the application of numbers, letters, labels, tags, symbols, or colors to provide identification and to expedite handling during shipment and storage”*.

- Policy statements which help vendors interpret DoD’s view of the RFID landscape. In July 2004, DoD issued a policy requiring passive RFID tagging at the case, pallet and the item packaging (unit pack) level for all new solicitations issued on or after October 1st, 2004 for delivery of material on or after January 1st, 2005. There is a list of exempt items which excludes RFID tags on bulk items such as sand, liquids, concrete, coal and wood. Munitions and explosives are a special case where tags will not be deployed until electromagnetic testing proves there is no risk for unplanned firing of trigger mechanisms. Obviously a great idea!

- Implementation plan which may be downloaded from <http://www.DoDrfid.org/supplierimplementationplan.htm>.
- DoD Supplier Passive RFID Information Guide (August 31, 2004).
- Web site encompassing all relevant information at [www.DoDrfid.org](http://www.DoDrfid.org)

What does all this mean to RFID procurement by the DOD?

With over 40,000 vendors and global operations, the DoD faces geographical, language and time zone barriers. In addition to these daunting factors, we have the technology risks that an early adopter faces for stability, availability and performance. To balance the risks vs. rewards the use of RFID will be phased in. And in all cases traditional labeling requirements like that of bar code will not be eliminated due to this initiative.



#### DoD’s RFID Roll-out

Strategy and tactics of this roll-out will be cleverly specified. In the beginning, RFID tags will only be required on a subset of DoD purchases starting with classes of supply covering:

- Class I Subclass – Packaged Operational Rations
- Class II – Clothing, Individual Equipment, and Tools.
- Class VI – Personal Demand Items

- Class IX –  
Weapon  
Systems  
Repair Parts &  
Components



Requirements for tags on these items will be on all individual cases, all cases packaged within palletized unit loads, and all palletized unit loads: And only when these commodities are shipped to the following locations:

1. Defense Distribution Depot, Susquehanna, PA (DDSP)
2. Defense Distribution Depot, San Joaquin, CA (DDJC)

Over the next few years the DoD will expand the classes of supply and the locations for shipments. Ultimately RFID will become a monolithic layer in the logistics system. Passive tags will have a ubiquitous presence and this will optimize their stability, availability and performance. All of the original factors that lead to a phased approach in the first place.

### **About the Author**

Mr. Clampitt has 20+ yrs experience in wireless. Academic credentials include a EE degree and an MBA.

Harold is a licensed professional engineer who started working on RFID in the 1980s by investigating bit error rate vs tag modulation schemes in a Rayleigh fading channel.

He published research papers on RF network design in the IEEE and other journals. Harold has lectured on RFID at the University of Chicago and was a featured speaker at the world's largest RFID conference.

Mr. Clampitt has a global perspective gained from living abroad and building successful profit centers in Europe, Asia, North America and Latin America. As a result of this experience, he traveled extensively and enjoyed 42% a year growth for over a decade in his wireless business.

To probe further read his blog at [www.rfidinfo.blogspot.com](http://www.rfidinfo.blogspot.com) or visit his web site at [www.RFIDoasis.com](http://www.RFIDoasis.com). Free excerpts from his book "The RFID Handbook" are available online @ [www.RFIDhandbook.blogspot.com](http://www.RFIDhandbook.blogspot.com).