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DLA R&D & Troop Support Uses Item Level Radio Frequency Identification (RFID) Technology to Revolutionize Recruit Uniform Issue Processes

Every service member remembers their clothing issue – the hours-long wait in an almost endless line to receive an initial set of uniform items – during basic training.

But a partnership between Defense Logistics Agency Troop Support and DLA's Logistics Research and Development branch is slashing the amount of time it takes to issue recruit clothing and revolutionizing clothing procurement and lifecycle management.

As recently as 10 years ago, the process to provide recruits clothing and apparel required for training and active duty relied almost exclusively on someone recording information with pen and paper, providing opportunity for human error to impact supply chain data.

“RFID [Radio frequency identification] technology offered a way to fully automate the [uniform issue] process and virtually eliminate human data recording errors,” said Julie Tsao, DLA Research and Development program manager.

Through the use of RFID technology, a method of identifying unique items using radio waves, the Service issuing team members can ensure a recruit's clothing bag contains the correct sizes and quantities of required items just by passing the bag near an RFID reader.

Previously, recruits had to visually inspect items to verify correct quantities and sizes were issued, a process could take up to four hours. With RFID it now takes 45 minutes on average for a recruit to process through clothing issues at Lackland AF recruit training center.

An RFID reader communicates with a transponder, which reads digital information on a microchip embedded in a tag attached to a uniform item. The item's identifying characteristics are accessed by passing a reader near the tag and can then be uploaded into a supply system where the data may be used to plan inventory or track demand for items.

The wireless transmission of an item's identity means the reader doesn't actually have to come in contact or line of sight with the tag, it just has to be within range of the tag's antenna. Data can also be read through clothing and non-metallic materials, which reduces material handling time and resources.

Basic trainees receive Airmen Battle Uniforms (ABU)

Basic trainee Kendell Pollock tries on a set of the Airman battle uniform while Brig. Gen. Darrell D. Jones watches to ensure the uniform is a good fit at the basic trainee equipment issue building Oct. 3 at Lackland Air Force Base, TX. The new crop of recruits was the first wave of trainees to be issued ABUs. General Jones is the 37th Training Wing commander.

(U.S. Air Force photo/Staff Sgt. Jeremy Larlee)



Every year DLA Troop Support, previously Defense Supply Center Philadelphia, purchases and ships hundreds of thousands of uniforms and related items to service recruit training centers. More than 400 vendors supply these items making it all the more important to collect and maintain precise data on items in the supply chain.

Accurate visibility of supply chain assets is critical for efficiency and effectiveness of managing these vital items. RFID item-level tagging allows for vastly improved inventory accuracy and supply chain visibility and traceability.

The item RFID tags with a unique identification number that connects to a database with its national stock number, nomenclature and size.

As recruits' items are selected during the clothing issue process, the items are placed in a duffel bag and taken to a portal or desktop reader to capture all of the unique ID numbers of the RFID tags at one time.

A display screen on the reader alerts the supply specialist to any missing, incorrect or extra items and inconsistencies in item sizes. If all items are present and correct, the reader shows a green light and the recruit completes the issue process. This finalizes the DLA sale of the uniform to the service.

Accurate point of sale information is sent to the DLA supply systems, which can then be used to replenish inventory with items that have been issued.

So far, military uniform manufacturers have been motivated

to adopt the item RFID process because they found it beneficial to help them track and manage items throughout their internal operations. They also have the potential to get paid faster. DLA Troop Support pays a vendor only after it verifies the correct order has been shipped and received, streamlining these processes could speed up the payment to the vendors. This is important to the viability of smaller vendors with limited cash flow.

There is a further potential to use item RFID technology to track and manage higher-value items that requires more intense lifecycle management. In the event of a product recall, RFID provides the ability to identify bad or unserviceable items.

The success at Lackland has paved the way for DLA Troop Support to expand use of item RFID technology to all service recruit training centers where the DLA retail sites are located.



Hand-held radio frequency identification readers, as seen here, are part of the technology the Defense Logistics Agency is using to revolutionize clothing procurement. (Photo courtesy of DLA Distribution)