

New Hub & Spoke Distribution Model Ensures Lean, Agile Supply Network

By Jessica Walter-Groft, DDC Command Affairs

Under DLA's Business System Modernization (BSM) program, outdated legacy systems are being replaced by modern software that gives the agency the agility necessary to optimally support the modern U.S. military deployed all around the world.

BSM uses commercial off-the-shelf software including SAP, an enterprise resource planning system which supports the core processes of order fulfillment,

technical quality, finance, and procurement; and Manugistics software that provides demand and supply planning capability.

Along with the new features of this modern

software come new capabilities to better serve the Warfighter. Hub and Spoke is a new distribution strategy recently adopted by the Defense Distribution Center (DDC) that supports this ability.

The Hub and Spoke model, implemented in August 2004 after two years of development, is sustained by software but maintained by human intervention, and seeks to place supplies in locations optimal for quick distribution. "The software studies the demand patterns of customers and projects their future needs so that we can place the stock at the distribution center best suited to provide distribution support to the customer," explained DDC Stock Positioning Specialist Keith Stahl.

With such a robust distribution network of 26 distribution centers stocking nearly 4 million items, this new resource management tool is a welcome aid to DDC stock positioning personnel like Stahl.

"Hub and Spoke allows us to maintain a leaner supply chain. Previously, we stocked items based on recurring demand. This new system, however, gives us triggers to make changes to our databases to support Hub and Spoke by telling us the amount of stock we should keep in any one location based on demand patterns," Stahl said.

The databases that Stahl and other DDC personnel maintain contain the information on which the system makes predictions on future demand and recommendations on the placement of stock. The databases track data such as customer demand for each item, preferred distribution method and on-hand balances of stock at each distribution center. Based on this information, the software supporting Hub and Spoke can also provide recommendations for stock

redistribution in order to maintain the integrity of the supply network.

"We want to make sure that a particular item is on the shelf at a nearby distribution center when our customer needs it, and that we don't have an overstock of that item.

This system allows us to have just enough on hand and just in time," Stahl said.

The "just in time" feature of the software aids supply planners and purchasing personnel at DLA's Inventory Control Points (ICPs) in procuring items by notifying them when stock is low and replacements need to be purchased so they arrive "just in time" for the next projected demand.

"This puts us another step closer to a most efficient distribution network," said Tony DeVito, Business Planning Division Chief for DDC's Logistics Operations Directorate.

The DDC distribution network as illustrated by the Hub and Spoke distribution strategy has two main hubs: Defense Distribution Depot Susquehanna, PA (DDSP) and Defense Distribution Depot

San Joaquin, CA (DDJC). These two distribution centers act as strategic distribution platforms and re-supply the other 24 distribution centers in the global network as necessary.



DDC Stock Positioning Specialist Keith Stahl provides an update on the effectiveness of the Hub and Spoke distribution strategy at a recent BSM stand down.

Hub and Spoke currently manages about 200,000 items. Beginning in January 2005, between 78,000 and 331,000 items will be added monthly through September 2006 until all DLA managed and depot stocked items, a total of 1.75 million items, are controlled under the Hub and Spoke distribution method.

The total number of items that will be managed under the Hub and Spoke strategy account for about half of the items in DDC's inventory. The remaining items are owned and managed by the military services.

As the distribution process continues to evolve, Stahl expects Hub and Spoke to be the distribution strategy of choice. "This is where the action is. Hub and Spoke is capable of adapting to new methods, rules, theories and philosophies to make it work in a more efficient and effective manner."

"Strategic stock positioning methods like Hub and Spoke will be around well into the future, always providing new and better ways to improve the distribution network," he added.

