

NATO Rolling Out System for Sharing Data

Refinements to the Savi CMS platform will enable the sharing of RFID tag data among NATO and its allied nations.

By Mary Catherine O'Connor

Dec. 7, 2005—Savi Technologies, a Sunnyvale, Calif., supply chain management solutions provider, says the North American Treaty Organization (NATO) has contracted Savi to upgrade and sustain operational support of an RFID-based network. Savi built the network for NATO in a pilot project beginning in 2004. The upgrade will enable the sharing of RFID tag data among NATO and its members' armed forces also deploying Savi's technology.

NATO is using the network to track multinational defense consignments along the supply chain of the International Security Assistance Force (ISAF), a peacekeeping force based in Kabul, Afghanistan, under NATO command since 2003. For the pilot, Savi interrogators (readers) and Savi SmartChain Site Manager software—which collects data read by RFID devices and incorporates local business rules at supply chain nodes—were deployed at nine checkpoints and four countries: the Netherlands, Germany, Uzbekistan and Afghanistan.

The contract award was made after NATO certified that the Savi CMS platform complies with NATO's Standardization Agreement (STANAG) 2233, titled "Consignment and Asset Tracking by Radio-Frequency Identification," which NATO ratified in August. NATO uses such standardization agreements to guide itself and its allied nations in business processes and technology applications.

STANAG 2233 is an agreement between nations to use ISO-standard active and passive RFID devices for tracking consignments and assets between nations. The agreement establishes standards regarding how nations will share and route data derived from RFID systems between nations and NATO. By sharing information regarding consignments, NATO and its allied nations can see where goods are in the supply chain, no matter if RFID tags attached to a consignment are read by an interrogator deployed by its own or another member's organization. This provides members more visibility into the ISAF supply chain, enabling them to avoid making extraneous supply orders.

David Shannon, Savi's vice president of software product management, explains that the STANAG 2233 specifications, which Savi built into its SmartChain Consignment Management Solution, are important because they allow NATO and its members to share only relevant supply chain data. "NATO and its member nations want to embrace open standards, and [they] want to do so in a way that all members would be able to use them," says Shannon.

To comply with these STANAG requirements, the SmartChain Consignment Management Solution (CMS) routes all tag reads through servers that process the data in compliance with the tag owner's preferences. A tag on a consignment sent from Nation A would be read when passing by an interrogator deployed by Nation B, but information regarding the consignment would be distributed to Nation B and other parties only if permissions linked to that tag allowed it.

Savi's CMS platform consists of its SmartChain supply network operating system software, its Site Manager middleware, which filters and aggregates RFID reads, and the SmartChain Consignment Management Application. The SmartChain Consignment Management Application pulls RFID tag data into tools such as computer-generated maps that show the location of consignments in the supply chain, and auditing applications using historical data to recount the journey of the consignment. The CMS platform enables NATO and its member countries' armed forces to monitor and configure the ISAF supply chain network, and to control the RFID devices linked to it. The solution enables military logisticians to manage consignments and associated manifests, as well as tagged supplies nested in the consignments, as they are packed, repacked, consolidated with supplies for other consignments or deconsolidated. The CMS platform can also send alerts regarding exceptions to logisticians or other personnel via e-mail, phone or the CMS application.

Australia's Department of Defense (see [Australia's Military to Track Supplies](#)) is currently deploying the Savi CMS. Denmark's Ministry of Defense deployed it last year (see [Danish Defense Contracts With Savi](#)), before it was commercially available and prior to the development of the STANAG-compliant data-routing protocols that enable the sharing of consignment information. Denmark will now upgrade its CMS software with the latest version, which will allow it to share data and receive supply chain data from NATO and its allied nations.

The [U.S. Department of Defense](#) uses Savi tags to track its consignments as part of its In-Transit Visibility (ITV) network, a cargo-tracking system employing active RFID technology. The [United Kingdom's Ministry of Defense](#) also uses Savi technology to track its consignments. But because these two military organizations have not deployed the CMS platform, they will be required to make customized upgrades to their software, which will also need to be compliant with the STANAG 2233 data-sharing protocols, in order to share and receive information related to their military consignments and those of NATO and other nations.

Under the contract, made between Savi and [NATO's Command and Control Agency](#) (NC3A)—an agency that procures and implements communications systems for NATO, the organization will purchase additional ST-654 active tags, which it will affix to pallets and shipping containers, and SR-650 interrogators that it will place at key transportation nodes along the ISAF supply chain. Additionally, Savi will make software enhancements to NATO's CMS platform so it can share and receive consignment information with the armed forces of NATO member nations.

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